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HOPS 1980/1981



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The social state of ferment the world has been in for years now, has not ceased to seethe during the past 12 months. Nor have the political tensions gone down. Since the end of September, 1980, Iraq and Iran have been at war. No settlement of this conflict is in sight for the time being. The Arabian-Israelite differences are now argued out on Lebanon territory. Attempts at mediation from the West have so far been without success. Also in Poland a dangerous situation occurred, until, despite the risk of an intervention by the neighbouring nations, the formation of free Unions could win favour after months of negotiations with the government. In Ireland and Spain spectacular acts of violence happened repeatedly.

**Political
Situation**

The drastic increase of crude oil prices — about 65% after 45% in 1979 — compelled the consumer countries to rigorous economy measures throttling the growth of the world trade perceptibly. In 1980, the real increase amounted to 1% only. In view of the advancing inequality between the petrol exporting countries, the industrial nations and the Third World, the danger of a protectionistic trade policy is growing in several fields.

**Economic
Situation**

An economic programme of the new **US** government is to halve the rate of inflation, create 13 million of new jobs and lead to an upswing in economic activity within three years. Also because of the still high discount rate, the rate of exchange of the Dollar, which at the beginning of January, 1981 was DM 1.71, kept on moving up to DM 2.39 in early June. That has been the all-time peak since 1977.

Since mid-1979 **Great Britain** has been in a deep recession. For 1981, a 10% rate of inflation and an increase of unemployment up to 3.25 million is expected. The rise in prices of almost 19% is surpassed within the Common Market only by Italy which has to cope with 20.5%.

Also in the **Federal Republic of Germany** a remarkable slowing down of economic activity has occurred: In 1980 the gross national product increased by 1.8% (real) only (1979: plus 4.4%) and the export surplus went down to DM 9.1 milliards (1979: DM 21.4 milliards). Particularly negative was the balance of current transactions closing with a record deficit of DM 28.2 milliards. As compared with other countries, the price increase being 5.5% was moderate. Worries were caused by the undiminishedly high unemployment rate which also until June, 1981, with 4.8% did not fall below the million limit. The extremely high national indebtedness will necessitate drastic savings in future.

The most important data:

<u>World-</u>		<u>1979</u>	<u>1980</u>	<u>Difference</u>
cultivation area	ha.	79.733	92.956	+ 16,5%
hop production	t.	121.867,4	123.803,4	+ 1,6%
α-production	t.	7.141,7	7.408,4	+ 3,7%
beer production	million hl.	909,3	937,8	+ 3,1%

World Production of Beer 1980

Country	1000 hectolitres		Country	1000 hectolitres	
Germany, Fed. Rep.	92.309		b. f.	19.430	795.577
USSR*)	70.000		Zaire	2.975	
United Kingdom	66.605		Cameroons	2.720	
Germany, Dem. Rep.	24.000		Ivory Coast*)	1.400	
Czechoslovakia	23.393		Ruanda-Burundi	1.165	
France	22.009		Zambia	1.050	
Spain	20.027		Zimbabwe	980	
Netherlands	15.684		Tanzania	900	
Belgium	14.500		Ethiopia	660	
Jugoslavia	11.712		Algeria*)	600	
Poland	11.185		Gabun	593	
Denmark	9.168		Mozambique	540	
Italy	8.569		PR Congo	539	
Romania*)	8.500		Egypt	500	
Hungary	7.800		Upper Volta*)	500	
Austria	7.606		PR Benin*)	420	
Ireland	5.999		Morocco	420	
Bulgaria*)	5.400		Angola*)	400	
Switzerland	4.080		Ghana	400	
Sweden	3.940		Togo*)	400	
Portugal	3.360		Senegal*)	350	
Finland	2.822		Tunisia	320	
Greece	2.500		Madagascar	318	
Norway	2.008		Mauritius a. Reunion	266	
Luxembourg	700		Namibia	265	
Malta	128		Central African Rep.	240	
Iceland	33		Uganda	182	
Europe		444.037	Liberia	172	
USA ¹⁾	227.746		Tchad	109	
Brazil	29.500		Sudan	20	
Mexico	26.019		Africa		38.834
Canada	20.669		Japan	45.138	
Venezuela	12.500		Philippines	7.101	
Colombia	12.300		China, Peoples Rep.*)	6.000	
Peru	5.343		South-Korea	5.796	
Ecuador	2.524		Turkey	2.800	
Cuba	2.365		Taiwan	2.432	
Argentina	2.328		Malaysia a. Singapore	1.730	
Chile	1.941		Vietnam*)	1.500	
Bolivia	1.000		India*)	1.400	
Dominican Rep.	860		Thailand*)	1.300	
Guatemala	800		Hongkong	750	
Panama	800		Indonesia	625	
Puerto Rico	735		Iraq	565	
Uruguay	695		Israel	520	
Paraguay	600		Okinawa	280	
Jamaica	595		Cyprus	181	
Nicaragua	500		Lebanon	150	
Honduras	478		Jordan	85	
Costa Rica	445		Sri Lanka	77	
El Salvador	378		Syria	70	
Trinidad	325		Asia		78.500
Martinique	59		Australia	19.433	
Guadeloupe	35		New Zealand	3.783	
America		351.540	Oceania	175	
South Africa	8.500		Australia/Oceania		23.391
Nigeria	7.850		other countries*)		1.500
Kenya	3.080		WORLD		937.802
c. f.	19.430	795.577			

*) Estimate

¹⁾ USA: Above figure refers to beer produced in 1980, i.e. including non-taxable and exported quantities

From 1979 until 1980, the world beer production could be increased by some 3%. The increment in the single continents was as follows: Europe + 0.7%, America + 6% (USA + 5.5%), Africa + 10.6% and Asia + 1.9%. Australia and Oceania, however, had to cope with a slight set-back (— 1%).

1980 Crop

The scarcity of hops which has already set in on the world market during the last two years, reached its climax with the 1980 crop.

**Market
Observations**

While crop evaluations were quite optimistic in August, in all European hop growing areas the prospects for rich harvest began to be judged as pessimistic as from mid-September onwards. A keen demand by the brewers for hops out of the 1980 crop was faced with a complete inability of the growers to deliver, who could not enter into further engagements beyond the advanced contracts already concluded. Also the chance of offering a possible surplus on the free market at the ever increasing prices, contributed to the fact that the growers assumed such an attitude. In the USA, however, an extremely large crop kept on growing.

The initial crop estimates confirmed what had been feared: The world crop to be expected would be some 150,000 zentners (7,500 t) smaller than in 1979. In addition, the first hop analyses of the 1980 crop showed very low alpha values. So, besides the low yield also the alpha production was weaker.

On the other hand, the American hop crop surpassed all expectations; it was 37% above the 1979 result. This surplus, however, was not sufficient to improve the market. The price level for US hops was currently adjusted to the European quotations.

The supply of the world market with European hops ran into a critical situation, as

- the contracts concluded with the farmers have partly been underdelivered to quite a considerable degree,
- the brewing industry demanded a full delivery of the contracts concluded with the traders because of extremely reduced stocks.

Individual negotiations with these breweries had to be held in order to come to some agreement regarding the delivery quotas for the single hop varieties. Fortunately, a great many consumers of European aroma hops understood this situation.

The prices went up to a limit beating everything yet for more than 20 years because of the undersupply situation. Under the circumstances a free hop market could hardly result. But also the farmers were dissatisfied with the market trend; for lack of available merchandise, they could hardly profit by the high hop prices.

During the months before harvest the contract business was practically dead. Mostly, the buyers wanted to wait for the result of the 1980 crop before going into concluding new contracts. The prices for the following crops oriented themselves by the high quotations of the 1980 crop; a price reduction does not emerge before 1982/83.

**Contract
Market**

The percentage of future contractual hops can be estimated as follows (related to the acreage presently under cultivation):

	1981	1982	1983	1984
Federal Republic of Germany	90 %	80 %	70 %	50 %
Belgium	50 %	40 %	30 %	20 %
France { aroma	100 %	90 %	80 %	
{ bitter	50 %	30 %	30 %	30 %
Czechoslovakia	90 %	80 %	60 %	50 %
Jugoslavia (Slovenia)	90 %	80 %	80 %	60 %
USA	98 %	96 %	80 %	53 %

Acreage and Hop Production

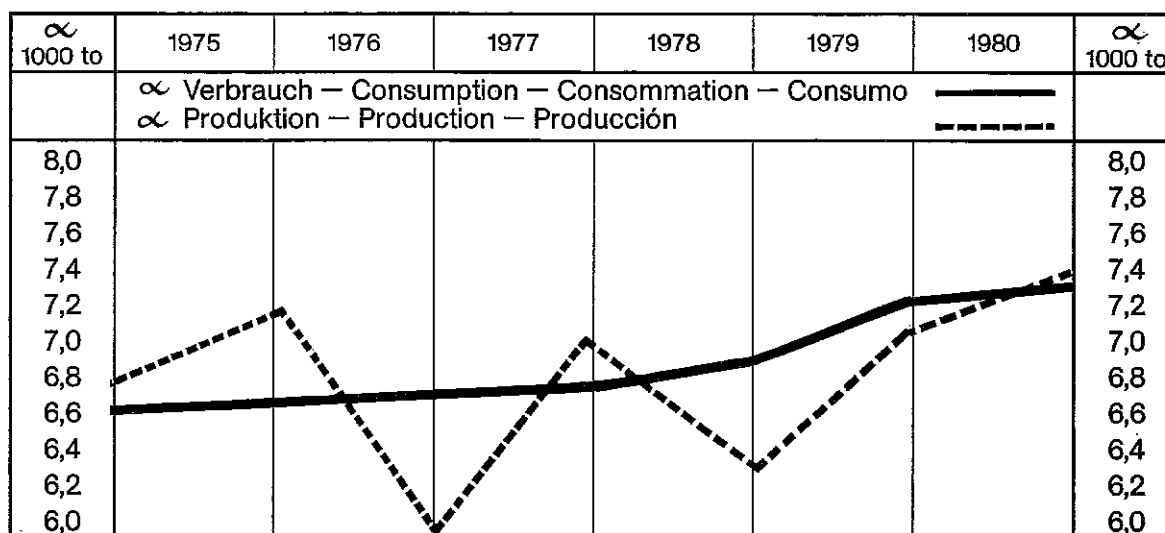
Country	1979			1980		
	Acreage hectares	Ø ton per ha	Crop tons = 1.000 kg	Acreage hectares	Ø ton per ha	Crop tons = 1.000 kg
Hallertau	14.718	1,83	26.924,9	15.232	1,55	23.600,0
Spalt	764	1,77	1.355,9	794	1,26	1.004,6
Hersbruck	167	1,70	284,1	166	1,27	204,4
Jura	509	1,86	944,9	583	1,48	864,8
Tettnang	1.125	1,48	1.671,7	1.159	1,05	1.210,9
Other Districts	23	1,24	28,5	20	1,53	30,6
Germany, Federal Rep.	17.306	1,80	31.210,0	17.954	1,50	26.915,3
Kent	3.104	1,71	5.316,6	3.028	1,72	5.199,7
Hampshire	209	1,59	332,4	198	1,40	277,9
Sussex	225	1,61	362,4	231	1,51	348,7
Herefordshire	1.592	2,02	3.214,3	1.643	1,77	2.912,7
Worcestershire	579	1,88	1.087,1	592	1,71	1.010,3
England	5.709	1,81	10.312,8	5.692	1,71	9.749,3
Aalst	176	2,06	362,6	184	1,63	300,0
Poperinge	554	2,33	1.289,3	610	1,80	1.100,0
Vodelée	22	1,61	35,5	24	1,25	30,0
Belgium	752	2,24	1.687,4	818	1,75	1.430,0
Alsace	474	2,12	1.004,1	468	1,86	872,3
Burgundy	43	1,56	67,2	38	1,73	64,1
Flanders	245	1,95	478,9	245	1,84	451,1
Other Districts	6	1,48	8,9	6	2,60	15,6
France	768	2,03	1.559,1	757	1,85	1.403,1
EC-Countries, w/o. Ireland	24.535	1,82	44.769,3	25.221	1,57	39.497,7
Saaz	7.040	1,08	7.622,4			
Auscha	1.795	1,20	2.150,3			
Tirschitz	615	1,30	799,9			
Slovakia	950	1,30	1.240,6			
Czechoslovakia	10.400	1,13	11.813,2	11.100	0,90	10.036,0
USSR	13.000	1,19	15.500,0*)	14.000	0,89	12.500,0 *)
Slovenia	2.139	1,29	2.770,5	2.212	1,48	3.268,3
Backa and Ilok	967	1,69	1.638,0	943	1,61	1.515,2
Jugoslavia	3.106	1,42	4.408,5	3.155	1,52	4.783,5
Germany, Democratic Rep.	2.180	1,67	3.610,4	2.156	1,10	2.363,5
Poland	2.447	1,00	2.448,0	2.474	0,70	1.721,0
Bulgaria	1.500	0,53	800,0*)	1.600	0,56	900,0 *)
Romania	1.150	0,96	1.100,0*)	1.200	1,00	1.200,0 *)
Hungary	568	0,96	550,0	556	1,20	668,6
León	1.797	1,43	2.571,8	1.797	1,19	2.136,8
Cantábrica and Galicia	55	0,25	13,9	55	0,25	13,5
Spain	1.852	1,40	2.585,7	1.852	1,16	2.150,3
Other European Countries	417	1,48	619,1	422	1,31	554,8
EUROPE	61.135	1,44	88.204,2	63.736	1,20	76.376,4
Washington	9.042	2,01	18.207,4	10.899	2,33	25.379,7
Oregon	2.287	1,71	3.911,8	2.503	2,20	5.512,1
Idaho	1.106	1,89	2.094,2	1.140	2,18	2.489,3
California	466	1,51	702,2	472	1,89	892,7
USA¹⁾	12.901	1,93	24.915,6	15.014	2,28	34.273,8
Canada	327	1,79	586,2	327	1,65	538,0
Japan	1.181	1,54	1.815,9	1.161	1,56	1.809,1
Victoria	430	1,79	771,1	460	1,78	818,5
Tasmania	576	2,53	1.457,0	611	1,98	1.207,5
Australia	1.006	2,21	2.228,1	1.071	1,89	2.026,0
New Zealand	136	1,90	258,8	156	1,80	281,1
Other Countries	3.047	1,27	3.858,6*)	12.000	0,72	8.500,0 *)
WORLD	79.733	1,53	121.867,4	93.465	1,32	123.803,4

The analysis values of hops from the 1980 crop were generally as weak as those in 1978. Especially the early and medium early varieties were affected by the unfavourable weather conditions. On an average, their α -content was 10% lower than in 1979. On the other hand, Brewers Gold was better off. An evaluation of the Yugoslavian variety Styrian has become problematic since only one standard quality is available by now.

There are no values for the free spaces in the following table.

Variety	1979			1980		
	Total Resin Content %	α %	% of total resins	Total Resin Content %	α %	% of total resins
Hallertau/Hallertau	12,0	4,3	35,8	10,8	3,9	36,1
/Hersbruck	11,7	4,2	35,9	10,4	3,6	34,6
/Hüller	12,0	4,5	37,5	11,8	4,5	38,1
/Perle				12,4	5,6	45,2
/Northern Brewer	16,0	7,9	49,4	15,2	7,6	50,0
/Brewers Gold	13,8	5,9	42,8	13,4	6,4	47,8
Spalt	13,2	4,8	36,4	10,6	3,8	35,8
Tettnang	13,4	4,5	33,6	10,8	3,9	36,1
Saaz	11,6	3,9	33,6	10,3	3,6	35,0
Alsace / Strisselspalt	10,8	3,0	27,8		3,0	
Belgian Northern Brewer	17,2	8,2	47,7	15,0	7,5	50,0
Belgian Brewers Gold	12,6	5,3	42,1	13,0	5,5	42,3
Polish Lublin	13,8	4,7	34,1	10,9	3,7	33,9
US-Yakima Clusters	16,4	6,8	41,5		6,8	

The figures in the above table refer to the values per Oct./Nov. 1980, as is, α evaluated conductometrically. Therefore, they cannot be used as a basis for the evaluation of supplies in the later course of the season.



**World
Production
of Beer
and Alpha**

For the determination of Alpha production following classification has been maintained:

- Group A) **Choicest Aroma Hops** (Saaz, Tettnang, Spalt)
- Group B) **Aroma Hops** (Hallertau, Hersbruck, Hüller, Strisselspalt, Lublin, Golding, Fuggle, Cascade and others)
- Group C) **Hops with no influence on the World Market** (Eastern Europe, England, Spain, Africa, Asia and other countries)
- Group D) **Bitter Hops** (Northern Brewer, Brewers Gold, Cluster, Bullion, Pride of Ringwood and others)

Hop Group	1979				1980			
	% of World Crop	Crop metr. tons	α ϕ	α metr. tons	% of World Crop	Crop metr. tons	α ϕ	α metr. tons
A	12	14.840,8	4,05	601,0	10	12.263,3	3,65	447,1
B	20	24.160,8	4,48	1.082,2	21	25.512,7	4,63	1.180,7
C	34	41.261,4	5,89	2.429,3	33	40.956,6	6,00	2.459,1
D	34	41.604,4	7,28	3.029,2	36	45.070,8	7,37	3.321,5
Total	100	121.867,4	5,86	7.141,7	100	123.803,4	5,98	7.408,4

When looking at the world market critically, it may be inferred that owing to the alpha deficit of the last years and the increase of hop prices resulting thereof, but also due to better utilization of the bittering substances, a reduction of the alpha rate has become possible worldwide. Therefore, for 1979 7.9 gm and for 1980 7.8 gm α acid per hectolitre of beer were assumed.

This gives the following α -balance:

		Balance
Accumulated surplus until 1978 requirements/1977 production		+ 557,3 to α
1979 requirements	7.183,5 to α	
1978 production	6.456,2 to α	
deficit	727,3 to α	— 170,0 to α
1980 requirements	7.314,8 to α	
1979 production	7.141,7 to α	
deficit	173,1 to α	— 343,1 to α
1981 requirements (estimate)	7.530,0 to α	
1980 production	7.408,4 to α	
deficit	121,6 to α	— 464,7 to α

In view of the large expansions of hop-growing areas during the last two years, the market might be compensated in 1981 provided good crops.

EUROPEAN COMMUNITY (EC)

Since January 1st, 1981 **Greece** has become the 10th full member of the European Community. For the adaptation of agriculture to the Common Market a transition period of 5 years, for some special cultures (peaches, tomatoes) 7 years, have been agreed upon.

The **new EC Commission** which was taking up its duties on 6. 1. 1981 has to solve difficult problems, such as to decrease unemployment, counteract inflation and reformation of the agricultural policy. The available financial means are, however, not sufficient for the necessary structural measures. In addition, national interests prevent a generally satisfactory solution of important issues (steel production, fishing agreement).

As off 1. 1. 1981 the European Clearing Unit has been replaced by the **European Currency Unit (ECU)** in accordance with Regulation (EEC, EURATOM) No. 3308/80 issued by the Council and dated 16. 12. 1980. As to definition and way of calculation, both of them are identical, the new ECU, however, is checked with regard to the „currency basket“ in regular intervals.

On 22. 3. 1981 the Italian Lira was devaluated by 6% within the framework of the European Currency System (ECS). This is meant to curb the deficit of the Italian balance of payments and to check inflation.

Hop Market

Formation of the EC Hop Market can, in the main, be regarded as completed. This is shown in a decreasing number of regulations on the hop market. Only the following regulations have been issued:

Regulation (EEC) No. 1756/80 issued by the Council and dated 30. 6. 1980 dealing with the establishment of a subsidy to hop farmers for the 1979 crop. The following aids have been granted:

Aroma hops	250 ECU per hectare (DM 688,—)
Bitter hops	225 ECU per hectare (DM 619,—)
Other varieties	250 ECU per hectare (DM 688,—)

Regulation (EEC) No. 573/81 issued by the Commission and dated 4. 3. 1981 on the 5th amendment to the Regulation (EEC) No. 1517/77 dealing with the establishment of the list of variety groups in the Community. The newly developed English varieties **Yeoman** and **Zenith** were included in group „other varieties“. This Regulation will be applied as from the 1981 crop onwards.

On 23. 12. 1980 the European Parliament passed the EC budget. Therein for the 1980 crop 7,840,000 ECU (about 21 million DM) are foreseen for area-related producer aids.

The growth of hops went mostly on under very unfavourable conditions. During the entire period from March until harvesting, temperature was below the normal values. Moreover, there were frequent and heavy rainstorms impeding work in the hop gardens considerably, particularly on heavy soil. In June there was a set-back of about two weeks, the growth of plants was quite varying.

Early June a heavy tempest destroyed the crop on an area of 200 ha in **Tett nang**, further 200 ha were hit by damages of varying dimensions. Heavy losses had to be borne there. But also **Spalt** was hit by a hailstorm at the end of July; damages were estimated to be some 15%. Early September there was a loss of about 3.000 to 4.000 zentners (150-200 t) in the **Hallertau**, caused by a severe hailstorm. In addition, wilt was very dominant in this area. Also in Spalt this disease was present.

The tardy spring, a cold and wet summer, hailstorm and damage caused by wilt were the reasons for a set-back of almost 14% as compared with the 1979 crop. But also the **quality** of the 1980 crop was poorer, mainly because of the disappointingly low bitter values.

The crop estimate, carried out as usual at the end of August, and the official weighing-up on 31st March, 1981, which also represents the final result, revealed the following figures:

1980 Crop

	Estimate		Weighed on 31.3.1981	
	Ztr.	to	Ztr.	to
Hallertau	534.000	26.700	472.000	23.600,0
Jura	20.000	1.000	17.297	864,8
Spalt	26.500	1.325	20.092	1.004,6
Hersbruck	5.700	285	4.087	204,4
Tett nang	25.500	1.275	24.219	1.210,9
remaining districts	560	28	612	30,6
Total	612.260	30.613	538.307	26.915,3

The huge divergence of more than 12% between estimate and hop harvest is due to extreme meteorological conditions and the difficult estimation of losses by hail, storm and wilt.

The unusually low hectare yields led to a considerable underdelivery of most of the contracts concluded with farmers. On an average it was more than 15% for all varieties. Especially the areas hit by hail had a high underdelivery quota. There was no purchase from the farmers in the customary sense.

Purchase from
Farmers

Where contracts were overdelivered by the farmers, the traders took up these quantities greedily. The development of producer prices is represented below.

Area/Variety	12. 9.	18. 9.	23. 9.	26. 9.	7. 10.	13. 10.	16. 10.	23. 10.	20. 11.
Hallertau									
Aroma varieties	1.100	1.200	1.300	1.600	1.700	2.000	1.800	1.700	1.500
/Northern Brewer	1.000	1.000	1.200	1.500	1.600	2.000	1.800	1.600	1.500
/Brewers Gold	1.000	1.000	1.200	1.500	1.600	2.000	1.800	1.600	1.500
Spalt	—	1.300	—	—	—	2.000	—	cleared	—
Tett nang	—	1.200	1.300	1.400	1.500	1.700	2.000	1.800	2.000

The precited prices are understood in DM per 50 kg, ex producer's premises, excluding packing and value-added tax.

Here the hectic efforts of the traders become apparent, to procure the merchandise even at the highest prices in order to possibly fulfill the engagements entered. It seems that it was possible to cover the most urgent needs until mid-October as afterwards a certain pacification occurred, especially since only small lots could be bought.

In Spalt, non-contractual hops were bought only twice. The area was already cleared by end October.

The last first-hand hops were taken up by the traders in mid-December. The Hallertau aroma varieties were quoted at DM 1.400,— per 50 kg, while Tett nang hops could maintain the price of DM 2.000,—.

For lack of non-contractual hops the Nuremberg Market was practically eliminated during this season. Also with foreign varieties there were no business possibilities.

Nuremberg
Market

Contract Performance

It can be assumed that the 1980 crop has exceeded the contract volume only slightly. Considering furthermore the excessive humidity of most of the hops delivered by the growers, 10 to 15 %, which had to be dried down to the level customary in trade, the necessity of a general cut of the contracts concluded by the trade with the breweries becomes evident. The extent of such cuts had to be settled and solved by individual negotiations between the contract partners.

Contract Market

There is a steady demand for follow-up contracts by the buyers. The experiences with the 1980 crop make it advisable to secure the supply of hop requirements by more contracts again.

Because of the already existing and extensive advanced contracts of the farmers, the offer is extremely low. Also the crops of the new acreages are already under contract for the most part. While the breweries prefer concluding short-term contracts as they count on a normalization of the hop market in the next years, the growers are interested in longer terms.

Development of forward contract prices from September till December, 1980 is shown below:

Variety	Crops				
	1981 Sept./Nov./Dec.	1982 Sept./Nov./Dec.	1983 Sept./Nov./Dec.	1984 Sept./Nov./Dec.	1985 Sept./Nov./Dec.
Hallertau Aroma	900/900/925	800/800/825	700/700/700	600/550/600	550/500/550
Hallert. Northern Brew.	800/800/800	700/700/700	600/550/600	550/500/550	550/500/500
Hallertau Brewers Gold	700/700/700	600/600/600	500/450/450	450/450/450	450/450/450

Above quotations in DM per 50 kg ex producer's premises, excluding VAT and packing material.

Acreage

For 1980, the hop acreage under cultivation is made up as follows:

Growing Region	1975	1980		
	Total Acreage ha	Existing Acreage ha	New Plantings ha	Total Acreage ha
Hallertau	16.911	14.424	808	15.232
Jura	491	490	93	583
Spalt	1.089	774	20	794
Hersbruck	336	161	5	166
Tettngang	1.351	1.116	43	1.159
other regions	33	20	—	20
Federal Republic	20.211	16.985	969	17.954

As compared with 1979, the total acreage increased by 648 ha. 514 ha fall to the Hallertau, and 74 ha are allotted to the Jura, while Hersbruck decreased by 1 ha. In the case of the typical aroma regions, Spalt increased by 30 ha and Tettngang by 34 ha. A glance at the new acreages shows that the greatest changes occurred in the Hallertau and the adjacent Jura, followed by Tettngang.

Cultivation of Varieties

The varieties cultivated in 1980 are broken down as follows:

Growing Region	Hallertau		Hersbruck		Hüller		Spalt		Perle		Tettngang		Northern Brewer		Brewers Gold		Record	
	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%
Hallertau	1.971	13	3.770	25	1.375	9	20	0	220	2	—	—	5.534	36	1.981	13	361	2
Jura	234	40	184	32	33	6	—	—	7	1	—	—	40	7	83	14	2	0
Spalt	483	61	2	0	10	1	266	34	—	—	—	—	6	1	26	3	1	0
Hersbruck	86	52	62	37	2	1	—	—	1	1	—	—	11	7	4	2	—	—
Tettngang	253	22	8	1	—	—	—	—	—	—	898	77	—	—	—	—	—	—
others	7	35	—	—	5	25	—	—	—	—	7	35	—	—	1	5	—	—
Total	3.034	17	4.026	22	1.425	8	286	2	228	1	905	5	5.591	31	2.095	12	364	2

Due to its wilt susceptibility the variety Hallertau went down by some 200 ha nationwide, while Hersbruck late could score an increase of almost 580 ha. The growing area of the variety Perle has almost doubled; 228 ha as compared to 115 ha in the preceding year.

The cultivation area for bitter hops has been enlarged by 120 ha, which are almost exclusively allotted to Hallertau Brewers Gold.

The shift of varieties in favour of aroma hops went on. According to EC variety classification

55 % are allotted to aroma hops,
43 % to bitter hops,
2 % to other varieties.

After a wet spring, the growth of hops went on regularly. Cold July weather slowed down the development of some varieties. Especially Wye Northdown was not able to make up for the set-back, even after the weather improved in August.

The generally damp and cool climate was favourable to the appearance of downy mildew, but also dealing with aphids was difficult.

The 1980 hop crop was of average **quality**. Contrary to other European provenances the alpha values were not appreciably below those of the previous year. Upon request of the brewing industry, hops were not sulfurized for the first time.

The 1980 crop result was only 5 % below that of 1979. Yet, some hop varieties produced some surplus which could be sold on the free market at favourable conditions.

The English hop marketing regulation, being in force since 1932, does not correspond to general EC law. An adjustment being under way of preparation is meant not to endanger the stability of the English hop market. It has, therefore, been foreseen to establish producers groups on a voluntary basis which shall assume the functions of the Hops Marketing Board and take over the already concluded forward contracts. By this, the EC regulations would be fulfilled.

ENGLAND

Hop Market Regulation

Cultivation of Varieties

The following table shows the cultivation of varieties in 1980:

County \ Variety	Golding		W.G.V.		Braml. Cross		Challenger		Fuggles		Target		North-down		Bullion		North. Brewer		other varieties	
	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%
Kent	289	11	290	11	323	12	246	9	48	2	915	34	146	5	95	3	20	1	320	12
Sussex	5	2	1	1	17	7	33	14	32	14	81	35	10	4	21	9	4	2	27	12
Hampshire	—	—	—	—	—	—	30	15	2	1	—	—	130	66	4	2	32	16	—	—
Herefordshire	97	7	—	—	—	—	329	22	429	29	—	—	424	29	62	4	124	8	11	1
Worcestershire	90	17	—	—	—	—	103	20	63	12	—	—	164	32	46	9	46	9	4	1
Brewers, etc.	34	6	26	4	36	6	77	13	—	—	89	15	89	15	94	16	42	7	92	18
Total	515	9	317	5	376	7	818	14	574	10	1.085	19	963	17	322	6	268	5	454	8

On the cultivated area that remained virtually unchanged there was practically no shift of the varieties. The aroma variety Challenger that was regarded as resistant against downy mildew, was all the same attacked by this disease this year.

There were two new varieties that were offered by the Hops Marketing Board in small quantities:

Yeoman, a very high-yielding bitter hop with about 9.5 % α and

Zenith, which despite of an average α -content of about 8 % is regarded as aroma hop.

These two varieties have, however, not yet been released definitely by the Wye College. In the EC variety list, both have been included in Group C, „others“, for the time being.

BELGIUM

As generally on the Continent, also in the Belgian hop-growing areas the weather was unfavourable for the most part. Especially during bloom and formation of cones it was cold and rainy. For the early hops, warm weather came too late in order to influence the crop result. Brewers Gold was attacked by wilt in a few cases.

Picking was somewhat delayed while the weather was good. Nevertheless, it was too early for Northern Brewer because of retarded growth and ripening.

The **quality** of the 1980 crop was generally good (95% Class I and 5% Class II). The yield remained 15% behind that of the previous year.

Market Development

In consequence of the set-back of the crop, some 70% of the Northern Brewer yield were contract deliveries. Because of the weak crops in other European countries, Belgian hops were keenly bought and prices were advancing sharply as shown below (per 50 kg producer price):

Variety		1. 9.	15. 9.	1. 10.	15. 10.	1. 11.
Northern Brewer . . . Bfr.		15.000,—	16.500,—	25.000,—	31.000,—	25.000,—
Brewers Gold . . . Bfr.		12.000,—	15.000,—	23.000,—	30.000,—	24.000,—
Replant Hallertau . . . Bfr.		16.000,—	20.000,—	30.000,—	cleared	

Already by the end of November, 1980 about 95% of the crop was sold.

The general shortness of stock on the market for hops out of the 1981 and 1982 crops enlivened the contract business also in Belgium.

Cultivation of Varieties

Larger losses of Brewers Gold during the winter and a decreasing quality have led to a decline of this variety. In detail the distribution of varieties is broken down as follows:

Area \ Variety	Brewers Gold		Northern Brewer		Hallertau		Record		Others	
	ha	%	ha	%	ha	%	ha	%	ha	%
Poperinge	299	49	249	41	44	7	6	1	12	2
Aalst	22	12	50	27	68	37	33	18	11	6
Vodelée	4	17	5	21	2	8	—		13	54
Total	325	40	304	37	114	14	39	5	36	4

Among „others“ number Saaz, Fuggles and Golding.

By way of trial some new varieties from the United Kingdom were planted while it is hoped that these can gradually replace Brewers Gold. These are the varieties Challenger and Target. But also Replant Hallertau is cultivated more and more, which have been neglected during the last years.

FRANCE

During the whole period of growth, the weather was too cool and wet. This slowed down the development of the plants and ripening of the hops was delayed.

In **ALSACE** flowering of the Strisselspalt occurred with a delay of over two weeks. The vines had, at that time, hardly attained the height of the trellises. There were also local damages caused by hailstorms. Because of frequent rainfalls, dealing with aphids turned out to be extremely difficult. Here and there, the wilt disease appeared.

Picking started at the usual time and in good weather. Because of the delayed ripening of the hops, this seems to have been still too early. The α -content was unusually low for all varieties. Apart from that, the **quality** of the 1980 crop was good.

Market Development

Because of the unfavourable weather, the quantity of the hop crop has dropped considerably, especially in **Alsace**. The contract volume being very high anyway, the existing contracts could not be delivered fully. That is why they had to be cut down by between 8 and 22% depending on the variety. Non-contractual hops were not marketed.

Since in the **Department Nord (Flanders)** the share of contracts is considerably lower, they were fully delivered there. For free hops up to FF 4.000,— per 50 kg were paid.

The varieties cultivated are shown below:

Area	Variety	Aroma Hops (Strisselspalt a. o.)		Brewers Gold		Northern Brewer		Record	
		ha	%	ha	%	ha	%	ha	%
Alsace		179	38	235	50	47	10	7	2
Flanders		1	0	181	74	63	26	—	—
Burgundy		7	19	29	76	2	5	—	—
Others		—	—	6	100	—	—	—	—
Total		187	25	451	59	112	15	7	1

While the acreage under cultivation for aroma hops remained unchanged, there was a slight decline for the other varieties.

Also in Ireland the weather was generally cool and wet. In addition, there was lack of sunshine during the important months of June and August. Picking started one week later than usually in order to obtain a better ripening of the hops.

IRELAND

Quality. The entire crop covering 75.5 t was adjudged to be Class I. The α -values of all varieties, except for Bullion, were 12% above the results of the previous year.

As compared with 1979, the hop acreage was enlarged by 7 ha and is now 66 ha. 5 ha of Northdown and 2 ha of Northern Brewer were new plantings. The cultivation of varieties is broken down into

12 ha of Fuggles
48 ha of Northern Brewer
6 ha of Northdown, and
0.2 ha of Bullion,

thus almost all are bitter hops.

Up to early July, cold weather delayed the growth of the hops. In the second half of the month there was a reversal and an abundant flower formation promised a good crop.

CZECHO-SLOVAKIA

On August 21st and 22nd the areas Saaz, Auscha and Tirschitz were hit by a disastrous **hurricane** devastating an acreage of 351 ha and damaging some 1.000 ha in such a way that **emergency picking** had to be started right away.

The originally optimistic crop estimate had to be corrected down to 245,000 zentners (12,250 t) after the storm. As this number was also too high, the sole CSSR exporter saw himself forced to announce a general reduction of all concluded contracts by 25% at the beginning of October, 1980. This quota could be reduced to 15% later on. Consequently there were no hops available for the free spot market.

Also for the following crops no offers will be issued.

SLOVENIA. Up to early June, growth was delayed by unfavourable weather. Ensuing good weather conditions and sufficient rainfall did not only make up for the set-back but occasioned a crop which was excellent both with regard to quantity and **quality** (94% Class I, 6% Class II), even though shortly before the beginning of picking, hop gardens on an area of about 94 ha collapsed by a storm. The damage was estimated to be about 100 tons of hops. As to alpha, the values of the previous year were obtained.

JUGOSLAVIA

The 1980 cultivation area comprises 1.111 ha of the variety Golding and 1.101 ha of Super Styrian. For the prolongation of the harvesting period, new early and late varieties are under trial cultivation.

BACKA. Up to early June similar conditions were prevailing as in Slovenia. In fact, the weather had turned out warm but the necessary rain had held off. The vines were retarded in growth and also the cones were smaller than normally. Yet, the **quality** of the crop was judged to be better than in the preceding year.

In 1981, some 200 ha of hops are planned to be newly planted, 92 ha in Slovenia and 110 ha in the Backa.

POLAND

A spell of bad weather from May until the end of July brought about a set-back of two weeks. Temperatures were 3 to 4° C below the normal values. Violent storms from August 20th until 23rd caused much damage in the hop gardens. As a result thereof the average Polish hectare yield was 14.9 zentners (745 kg) only on the full bearing acreage of 2.311 ha.

Picking was delayed because of unfavourable weather. Not only was the yield by 30% lower than in the previous year due to the bad weather conditions, but also the α -content of the hops was some 10% less. Only 34% of the crop were Class I, 54% Class II and 11% Class III.

Because of the adverse circumstances, the sole exporter found himself compelled to reduce all existing contracts for the 1980 crop by 30%. An apportionment of the missing quantities to the 1981 crop was promised.

The entire cultivation area of 2.474 ha, 163 ha of it being new acreage, is composed of
 2.161 ha Lublin
 263 ha Pulawy and
 50 ha Northern Brewer.

The acreage of the variety Lublin was extended by 163 ha, Pulawy decreased by 136 ha and Northern Brewer remained unchanged. The tendency towards specialization on the variety Lublin has continued.

GERMAN DEMOCRATIC REPUBLIC (GDR)

Like in other European countries, the weather conditions were mainly disadvantageous for the development of hops: Temperatures were too low and abundant rainfalls too often. Caused by hail and storms there were considerable damages in the Erfurt and Magdeburg areas.

These conditions did not only affect the quantity (65% of 1979's yield) but also the **quality**. The average α -content of the hops was some 13% below that of the previous year. In order to supply the own brewing industry, hops had therefore to be imported.

For 1980, cultivation areas and crops are made up as follows:

Growing Region	Acreage ha	Yield to/ha	Crop to
Halle/Magdeburg	944	1,07	1.013,1
Erfurt	535	0,91	486,4
Dresden/Leipzig	640	1,28	820,8
Gera/Karl-Marx-Stadt	37	1,17	43,2
Total	2.156	1,10	2.363,5

In variety cultivation, the tendency towards hops with a high bittering value continues, as is represented below:

Saaz	1978:	930 ha	—	1980:	658 ha
Northern Brewer	1978:	1174 ha	—	1980:	1248 ha
Bullion	1979:	220 ha	—	1980:	250 ha

SOVIET UNION

Publications dealing with growing regions, hop crop and beer production state highly divergent figures. It is thus hardly possible to gain a fitting picture of that country.

When looking at the divergent information, it must be taken into account that the cultivation areas (Ukraine, Moscow area until the Altai Mountains) are separated by long distances which also means that there are greater climatic differences than in other hop growing countries.

A better knowledge would be useful for an analysis of the hop market.

SPAIN

Also here the generally too cold summer weather has been detrimental to the development of hops. Delayed picking did not bring about any appreciable improvement of the quantity harvested. Though 98% of the hops were adjudged to be Class I, the content of α -acid with an average of 7.5% remained behind the result achieved in 1979.

The 1980 crop attained only 83% of the quantity harvested in the previous year and is made up as follows:

	1,350,000 kg of variety H-3 =	63% of total crop
	799,000 kg of variety H-7 =	37% of total crop
and	1,450 kg of aroma hops =	0.06% of total crop.

PORTUGAL

During the months of May, June and July, which are important for the growth of hops, the weather was mainly rainy and poor in sunshine. A dry period which was unfavourable for the formation of cones followed.

On the unchanged area under cultivation, only 74% of the hop quantity of the previous year were harvested. Especially in **Braga** the hectare yield was extraordinarily low (63% of 1979's yield), while 91% of the preceding year's quantity have been obtained in **Bragança**.

Quality. The cones were mostly small but had ample α -acid. 99% of the crop were graded as Class I.

The acreage under cultivation is

118 ha yielding 135.8 t in Braga
72 ha yielding 122.3 t in Bragança

Only the variety **Brewers Gold** is cultivated which had an average α -content of 8.4% in Braga and even 9.5% in Bragança.

AUSTRIA

Also in the **MÜHLVIERTEL (UPPER AUSTRIA)** the development of hops was checked by cold weather in June and July. The vines just attained the height of the trellises and remained pointed. On August 22nd and 23rd, storms caused some damage.

Despite the unfavourable weather conditions, the **quality** of the hops was good; 98% was Class I. Yet, the bittering content was 10 to 15% lower than in 1979.

On a somewhat larger cultivation area of 59 ha, 74.9 t of hops were harvested. There were no changes in the cultivation of varieties.

In the cultivation area of **LEUTSCHACH (STYRIA)** 79.2 tons of hops were harvested on an acreage of 71 ha. The predominant portion was the traditional variety **Golding**; 22% are bitter hops in the varieties **Atlas** and **Apollo**; their alpha content is 9.9%.

The hop production of the area is taken up by the domestic brewing industry.

SWITZERLAND

Up to mid-July the weather was mainly unsettled, rainy and cool. Although the beginning of the harvest was protracted somewhat, the yield of the previous year could not be attained. The entire production was taken up as quality class I by the brewing industry.

On a slightly enlarged cultivation area of 12.4 ha, 19.25 t of hops (in 1979: 20 t) were harvested. There were no changes in the cultivation of varieties. The variety **Perle** is cultivated on 0.04 hectares.

**USA
Growth**

Up to June, 1980, the weather in all hop growing areas has generally been good. Sub-surface moisture was sufficient and the water supply during the vegetation period was adequate. The summer weather was generally cooler than normal which apparently was beneficial for hops growth.

WASHINGTON. Early in the year **downy mildew** presented problems. With the beginning of hot summer weather this menace, however, abated. Very unusual for this region was a locally restricted **hail storm** in mid-June. The damage caused in the Yakima area remained limited. On May 18th the nearby volcano Mount St. Helens erupted. An ash rain coming down over parts of the Yakima Valley did not affect the development of the plants.

Also in **OREGON downy mildew** had to be dealt with locally. The hops, particularly **Fuggles**, were in excellent growth. The weather favoured the two other states **IDAHO** and **CALIFORNIA**, where the crop was good, too.

Indications for a very good hop crop were even surpassed by the record harvest as is shown in the following table:

	Estimate August 1980		Estimate September 1980		Final result	
	Mill. lbs	to	Mill. lbs	to	Mill. lbs	to
Washington	49,765	22.573	51,110	23.183	55,952	25.380
Oregon	10,540	4.780	11,160	5.062	12,152	5.512
Idaho	4,900	2.222	4,900	2.222	5,488	2.489
California	2,040	925	2,040	925	1,968	892
Total	67,245	30.500	69,210	31.392	75,560	34.273

Thus the crop excelled the result of the previous year by 37.5%.

The **quality** of the hops was satisfactory. The α -content was slightly above that of previous years, not least because of the increasing rate of newly developed high alpha varieties.

Market Development

The prices for the 1980 crop had been continuously increasing since autumn, 1979. By the end of May \$ 2.50/lb were reached and maintained until July, 1980. News about a poor crop to be expected in Europe blocked the American market in August. In spite of the own record crop, the hop prices moved up strongly in early September; at the same time a hectic purchasing activity started. The spot market traded some 10,000,000 lbs (90.700 zentners). All first-hand hops were cleared by the end of October, except some very small remainders, at prices up to \$ 5.50/lb. Despite considerably higher yields, the filling of old low price contracts kept on being a problem in certain instances, particularly in the State of Washington.

Early in 1981 the entire stock of old Pool hops of the 1974, 1975 and 1976 crops was sold for nonbrewing outlets.

The following table shows the development of prices for spot-market hops of the 1980 crop (producer prices in \$/lb., excluding premiums, f.o.b. farm):

Variety	Origin	July	September	October
Clusters	Yakima	2.60	3.25	5.25
Cascade	Yakima	2.60	3.25	5.25
	Yakima	3.05	3.25	—
Bullion	Oregon	2.60	3.25	5.25
	Oregon	2.85	3.25	—
Fuggles	Oregon	3.15	3.25	—

Owing to the clearance of the first hand, purchasing slowed down by mid-November and the market became stable.

Contract Market

During the months of April through September, 1980 large contracts for future years were concluded in connection with the much in demand 1980 crop.

With the conclusion of the spot market for 1980 future contracting became quiet, the attained price level was, however, nominally maintained. The development of contract prices is shown below:

Variety	Origin	Crops														
		1981 July/Oct./Dec.			1982 July/Oct./Dec.			1983 July/Oct./Dec.			1984 July/Oct./Dec.			1985 July/Oct./Dec.		
Clusters	Yakima	2.60	3.25	3.25	2.60	3.15	3.—	2.60	3.—	2.75	2.60	2.75	2.75	2.60	2.75	2.75
Cascade	Yakima	2.60	3.25	3.25	2.60	3.15	3.—	2.60	3.—	2.75	2.60	2.75	2.75	2.60	2.75	2.75
	Oregon	3.05	3.10	3.50	3.05	3.10	3.35	3.05	3.15	3.20	3.05	3.15	3.20	3.10	3.15	3.20
Bullion	Yakima	2.60	3.25	—	2.60	3.15	—	2.60	2.65	3.—	2.60	2.75	—	2.60	2.75	—
	Oregon	2.85	3.—	—	2.85	3.—	—	2.85	3.05	—	2.85	3.05	—	2.85	3.05	—
Fuggles	Oregon	3.15	3.15	3.50	3.15	3.15	3.45	3.15	3.20	3.40	3.15	3.20	3.35	3.20	3.20	3.30

\$ per lb. f.o.b. farm, excluding premiums.

Cultivation of Varieties

In 1980, the cultivation area was enlarged by 2,112 ha or 16%, 1,856 ha of which being situated in the State of Washington.

State	Clusters		Bullion		Brewers Gold		Comet		Cascade		Fuggles		Talisman		others	
	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%
Washington	7.380	68	1.392	13	313	3	250	2	1.415	13	—	—	*)	—	150	1
Oregon	17	1	609	24	366	15	2	0	467	19	974	39	56	2	11	0
Idaho	422	37	—	—	15	1	—	—	198	17	—	—	269	24	235	21
California	445	94	—	—	—	—	28	6	—	—	—	—	—	—	—	—
Total	8.264	55	2.001	13	694	5	280	2	2.080	14	974	6	325	2	396	3

*) Included with Washington Late Clusters

Though having lost quite a share, Clusters continue to be the most marketed variety. This is also reflected when comparing the new acreages of the main varieties.

	1979	1980	1981
Cluster	— 270	+ 833	+ 994 ha
Bullion/Brewers Gold	+ 393	+ 377	+ 372 ha
Cascade	+ 140	+ 399	+ 446 ha
Fuggle	+ 1	+ 51	+ 129 ha
Galena	0	+ 100	+ 533 ha

At the meeting of the Hop Administrative Committee (HAC) on October 14th, 1980, the following resolutions were taken:

1. The salable quantity for 1980 was set at 128 % and the concept of filling of deficiencies was applied after the harvest.
2. After checking the presumable supply/demand situation, the salable quantity for the 1981 crop was set at 77,200,000 lbs (700.350 zentners) = 130 % of the base rate. For the 1982 - 1984 crops it was recommended to the growers that they be permitted to sell up to 130 % of their allotment base. The HAC cautioned, however, not to contract more than the following percentages as off 1985:

1985: 110 % of base allotment
1986: 105 % of base allotment
1987: 100 % of base allotment.

The concept of filling of deficiencies i.e. the exchange of base allotment among growers after the harvest, was prolonged up to and including the 1984 crop. This presupposes that the crop be smaller or equal as the respective salable base allotment. In the case of 130 % all hops above 77,200,000 lbs would have to go into the Reserve Pool.

Except for 1981, all suggestions must be considered merely as HAC recommendations. In accordance with the Marketing Order, the legally binding establishment of the salable percentages is admissible for the next crop only at a time. So far, the HAC has, however, kept all recommendations made.

The growth of hops proceeded under normal conditions in the sole growing area of **Fraser Valley (British Columbia)**. The crop produced was an average one which, however, remained 8 % below that of the previous year. Also the **quality** was referred to as being average.

CANADA

The acreage and the cultivation of varieties have not changed as compared with 1979.

The 1980 crop was completely sold and also the subsequent years are already under contract.

Since 1970, hops have been cultivated by way of trial. To start with, Hallertau sets crossed with other varieties in order to obtain a better adaptation to the climatic conditions, were taken. Since daylight is too short near the equator, the hops are illuminated artificially during some hours a day.

COLOMBIA

As reported, the hops yield two crops a year which makes spending of such like higher costs worthwhile. Bittering substance and aroma of the hops are meeting with the expectations and thus an extension of the acreage under cultivation is planned to take place during the next 5 to 10 years. At present, the acreage still covers 2 ha.

In **VICTORIA** the hops were growing under favourable conditions bringing about a 10 % higher crop as compared with 1979. On the other hand

AUSTRALIA

TASMANIA had to cope with a set-back of some 17 %, mainly caused by violent winds, which brought about damage on a larger scale particularly in the Southern part.

Quality. Except for a shortfall of the entire Australian crop of 8 % as compared with the previous year, also the average α -content being 9 %, as is, was below the normal value.

With the exception of a small acreage grown with Clusters, only the bitter variety Pride of Ringwood is planted.

In the north of Tasmania a new hop-growing area covering some 140 ha came into being. Further 120 ha of new acreage are planned for 1981/82 bringing the Australian acreage up to some 1,300 ha.

NEW ZEALAND

On an acreage under cultivation enlarged by 20 ha as compared with 1979 a 9% larger crop was harvested. The **quality** was excellent and the average α -content was indicated to be 11.3%.

92% of the total crop of 281.1 tonnes were seedless hops. Among these are bitter varieties such as Green Bullet, Sticklebract and Roborgh Super Alpha. About half the hop production is taken up by the national brewing industry, and about the same quantity is exported to Europe and the USA.

JAPAN

During spring the weather was sunny and warm. Yet, the summer months which are important for the formation of cones were cool and poor in sunshine.

In spite of a slightly decreased acreage under cultivation, the crop yielded was almost as large as in 1979. 89% of the hops were Class I and 9% Class II.

While the producer prices have so far been set between the breweries and the Farmer's Cooperative on a standard basis, as from the 1980 crop onwards the prices will be negotiated individually. This will bring about different quotations.

SOUTH KOREA

Alike Japan, hop cultivation is furthered by contracts of the breweries with the growers. The small hop plantings are scattered in narrow valleys east of Seoul. Mainly the early Japanese aroma variety Shinshu Wase and, by way of trial, some Cascade hops are cultivated.

The 1980 crop is indicated to be 392 tons. A hop acreage of some 400 ha may be readily inferred from that.

PR CHINA

Hardly realized by the rest of the world, the People's Republic of China has developed into an important hop producing country which has already entered into export markets.

For lack of precise data, the extent can only be estimated. The cultivation area is supposed to be some 10,000 ha producing a crop of some 7,500 tons of hops. As far as is known, only bitter hops are grown.

INDIA

The hop acreage in the **Kashmir Valley** increased by 25 ha in 1980 and comprises now 150 ha yielding a crop of 85.1 tons. The greatest part of the hop growing acreage continues to produce Late Clusters. Yet, with new varieties breeding tests are being carried out which are said to be brought to a conclusion soon. Also in the technical field, progress has been made.

The national brewing industry took up the entire hop crop.

TURKEY

Owing to favourable weather conditions and sufficient irrigation possibilities, an excellent crop with regard to quantity and **quality** could be harvested. Combating of diseases and pests is performed by the Ministry of Agriculture. **Picking** is exclusively done by hand and starts in the second half of August.

The brewing industry of the country has instructions take over the national hop production. On an area covering 476 ha, approx. 467.5 tons of hops (1,870 tons of green hops) were harvested. By that the domestic requirements have been surpassed and thus the surplus could be exported.

The varieties grown are Late Clusters (427 ha) and Brewers Gold (49 ha). On a small acreage, Alsacian Strisselspalt were cultivated by way of trial.

1981 Crop

The weather being warm and sunny in March, the hops were able to sprout vigorously in **Europe**. A setting in of winter weather in mid-April with snowfalls and frosts down to -7°C brought growth to a standstill. At the beginning of May, an improvement of the weather occurred, yet it was still a too cool and wet month. Since the end of May the weather has been ideal, and the hops could develop normally. Fortunately the frost has hardly left any damage.

Growth

There is no news about any special climatic influences or diseases in the **USA** so that up to now a normal crop may be taken as granted.

At the meeting of the International Hop Growing Convention (IHGC) in Paris in mid-March 1981, the following **enlargements of the cultivation areas for 1981** were made known by the member countries:

**Hop
Acreage
1981**

Federal Republic of Germany	approx. 1,050 ha
England	approx. 50 ha
Belgium	approx. 20 ha
Czechoslovakia	approx. 720 ha
Jugoslavia	approx. 200 ha
Poland	approx. 25 ha
Spain	approx. 150 ha
USA according to HAC report dated 7. 5. 1981	<u>approx. 2,480 ha</u>
Total	<u>approx. 4,695 ha</u>

The world hop-growing area is thus stepped up to 98,160 ha even more rapidly than expected, acreage which with an average yield of 1.4 tonnes can produce a world crop of 137,400 tons or 2,748,000 zentners. We shall see whether the world market will get into another overproduction again.

Nuremberg, June 6th, 1981

JOH. BARTH & SOHN

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

How a new Hop Variety is born

The task the Research Institute Hüll saw itself faced with originally was clear: For decades downy mildew and later on Verticillium Wilt have been threatening the Hallertau hop cultivation.

So priority had to be given to breeding disease-resistant varieties. Soon, however, new claims were raised to the researchers by the growers and the brewing industry. The newly developed varieties were supposed to produce good yields and the brewing industry called for hops with high alpha acid content together with superior aroma.

The course of development of the variety Perle shows the huge expenditure of time and labour to realize these requirements:

1st year	♀ <u>Parents</u> ♂	About 80 crossbreedings a year male × female
2nd year	30,000 seedlings in the greenhouse	downy mildew test
3rd to 5th year	2.000 single sets in the nursery	yield and quality tests
6th to 7th year	36 stems in the nursery	wilt test
8th to 11th year	7 stems at different places	yield and quality tests
12th year	variety Perle	Award of variety protection

The variety Perle was crossed in 1965. Variety protection was awarded by the Federal Registration Office of New Plant Varieties in 1978 only.

We have dedicated the last page of our report to hop research in order to appreciate the tasks and successes of Hüll and the other Institutes in Europe, the USA, Australia and Africa. An active cooperation of the brewing industry in the committees of the Research Institutes does not only, in our opinion, seem to be desirable but necessary.

We should like to extend our thanks to the Hans-Pföf-Institute for Hop Research for the data and information put at our disposal.