

Production of Beer 1968

Country	1000 bbl. of 31 gall. each		Country	1000 bbl. of 31 gall. each
Germany W. 67,427			b. f.	3,987
East*) 12,783	80,210		Nigeria	525
England	44,688		Zambia	503
USSR*)	30,791		Cameroons	469
Czechoslovakia	17,130		Angola	452
France	17,012		Algeria	443
Belgium	10,772		Rhodesia	348
Spain	8,684		Ruanda-Burundi	302
Poland	7,914		Morocco	247
Austria	6,275		Tanzania	221
Netherlands	5,836		Egypt	* 213
Denmark	5,308		Mozambique	209
Jugoslavia	4,674		Ethiopia	204
Italy	4,592		Tunisia	200
Hungary	4,137		Uganda	187
Switzerland	3,814		Ivory Coast	145
Ireland	3,068		Rep. Congo (Brazzav.)	100
Roumania	2,992		Sudan	85
Sweden	2,851		South West Africa	66
Bulgaria	1,960		Senegal*)	60
Finland	1,318		Centralafric. Rep.*)	60
Norway	1,130		Madagascar	56
Portugal*)	810		Dahomey	55
Greece	682		Libya	47
Luxembourg	439		Togo	46
Malta*)	30		Upper Volta	38
Iceland	21		Liberia	34
Europe		267,138	Guinea	25
U.S.A.	114,193		Ghana	* 213
Canada	12,790		Africa	
Mexico	10,440		Japan	21,527
Brazil	7,500		Philippine Islands*)	2,267
Colombia	6,818		Vietnam	1,108
Venezuela	2,754		China*)	1,023
Argentina	2,426		Malaysia	426
Peru	1,952		South-Korea	423
Chile	1,439		Turkey	324
Cuba	1,158		Taiwan	317
Puerto Rico	1,012		Singapore	308
Uruguay	520		Thailand*)	269
Ecuador	392		Indonesia	213
Jamaica	265		Israel*)	213
Panama	258		India	164
Bolivia	247		Hongkong	153
Nicaragua	238		Okinawa	136
Guatemala	204		Iran	123
Dominican Republic	170		Ceylon	60
Honduras	170		Iraq*)	59
El Salvador	123		Cyprus	53
Costa Rica*)	102		Lebanon	47
Trinidad a. Tobago	87		Pakistan	21
Paraguay	84		Syria*)	20
Martinique	17		Asia	
America		165,359	Australia*)	11,749
Congo-Kinshasa	1,833		New Zealand	2,638
Rep. of South Africa	1,549		Tahiti*)	17
Kenya	605		New Caledonia*)	5
c. f.	3,987	432,497	Australia/Oceania	
			Total	485,700

Beer Output in Western Germany

Output of beer in Western Germany during the year 1968 amounted to . 65,308,633 bbl.
 Production of beer in the Western sector of Berlin for the same period was . 2,118,878 bbl.
 Total 67,427,511 bbl.

These figures include 1,424,876 bbl. for exports delivered tax-free (1967 = 1,330,433 bbl.) as well as sales against foreign currency and to stationed foreign troops totalling 266,871 bbl. (1967 = 276,035 bbl.).

The imports of beer to Western Germany amounted to 356,000 bbl. in 1968.

Imports of Beer 1968

Crop 1967 (Supplement)

Complete figures of imports and exports of hops, crop 1967 during the period of September 1st, 1967, to August 31st, 1968, can now be stated as follows:

	Import	Export
Germany	9,537,540 lbs.	17,505,185 lbs.
Belgium	3,867,309 lbs.	2,724,444 lbs.
England	1,879,311 lbs.	1,961,763 lbs.
U. S. A.	9,058,260 lbs.	17,871,479 lbs.
France	2,879,428 lbs.	2,278,454 lbs.

Although concern was to be noted, that the large crop 1967 could not be sold, the attractive prices encouraged the breweries to further stockpiling.

The 1967 world crop thus could be sold almost entirely to the brewing industry and the demand appearing in the summer of 1968 had to be satisfied partially by repurchasing hops from brewery stocks. Only in the U.S.A. small supplies of unsold hops remained at the beginning of the season 1968.

Crop 1968

With the sellout of the world hop crop 1968, the market constitution is even healthier than it was a year ago. Hop production and consumption are in a more balanced ratio. This could not have been accomplished without the selfimposed limitation of US hop acreage. In spite of the poor market situation, the West-European hop growers on the continent not only kept their acreage, but even enlarged it somewhat. The West-German hop production (1968 share of world production 23.8 %, 1966: 18.4 %) is again ahead of the US-production (1968: 21.6 %, 1966: 26.6 %).

Market Survey

A series of contrasting factors contributed to the development of the world market of the hop crop 1968:

- Hop savings through increased production of refined hops
- Increased acreage of hops with a high bittervalue in Europe
- A well stocked brewing industry.

In contrast to these were however:

- An increased world beer production of ab. 19.6 million bbl. (approx. 75,000 cwts. of an increased hop demand)
- A smaller world hop crop than in 1968 by ab. 50,000 cwts. = 2.5 %.

The contradiction in market influences caused a basically different market situation in the U.S.A. and Europe. While the **US-hop market** 1968 was, due to rising prices extremely firm with little ability to make deliveries, in Europe, especially in West Germany, there were still bearish tendencies. The changed supply situation did not show itself until the complete sellout of all inventories in the spring of 1969 at slightly rising prices.

The rapid sale of the **German crop** is mostly due to considerably increased exports of raw and refined hops, since German hops had practically become the most favourably priced product of the world market.

The harvests of the **Eastern European countries** except for small remaining quantities were also sold at an early date, because of future contracts and increased local demand.

Origin	Total resin content anhydric	Soft resins		Humulon		Lupulon + Fraction of soft resin		Hard resins		Bitter value Wöllmer	
		%	%	%	%	%	%	1968	1967		
Hallertau	16.5	13.5	81.80	5.5	33.30	8.0	48.50	3.0	18.20	6.4	7.1
Hallertau/Au	16.5	13.3	80.60	5.5	33.30	7.8	47.30	3.2	19.40	6.4	6.9
Hallertau/Mainburg	16.6	13.9	83.75	5.7	34.35	8.2	49.40	2.7	16.25	6.6	7.2
Hallertau/Wolnzach	16.9	14.1	83.45	5.9	34.95	8.2	48.50	2.8	16.55	6.8	7.3
Hallertau/Barth-Nordbr.	21.2	18.3	86.35	10.4	49.10	7.9	37.25	2.9	13.65	11.3	11.4
Spalt	15.9	13.3	83.65	5.4	34.00	7.9	49.65	2.6	16.35	6.3	6.5
Tettwang	15.9	13.2	83.00	5.5	34.60	7.7	48.40	2.7	17.00	6.4	6.7
Hersbruck	17.0	13.4	78.90	5.6	32.90	7.8	45.90	3.6	21.20	6.5	6.6
Alsace	15.5	13.4	86.50	6.1	39.40	7.3	47.10	2.1	13.50	6.9	7.4
Belgium/Brewers-Gold	17.2	13.6	79.10	7.9	46.00	5.7	33.10	3.6	20.90	8.5	8.2
Saaz	16.6	13.5	81.30	6.1	36.75	7.4	44.55	3.1	18.70	6.9	5.8
Jugoslavia/Styria	13.9	11.6	83.45	6.3	45.30	5.3	38.05	2.3	16.55	6.9	7.3
Jugoslavia/Backa	16.8	14.6	86.90	6.2	36.90	8.4	50.00	2.2	13.10	7.1	5.1
Yakima Seedless	16.9	13.4	79.30	6.8	40.20	6.6	39.10	3.5	20.70	7.5	8.7

Bitter Values of Crop 1968

The figures of the above table refer to bitter value (dry basis, alpha evaluated conductometrically) only in the beginning of the season and will not hold good for the judgement of supplies in the later part of the year.

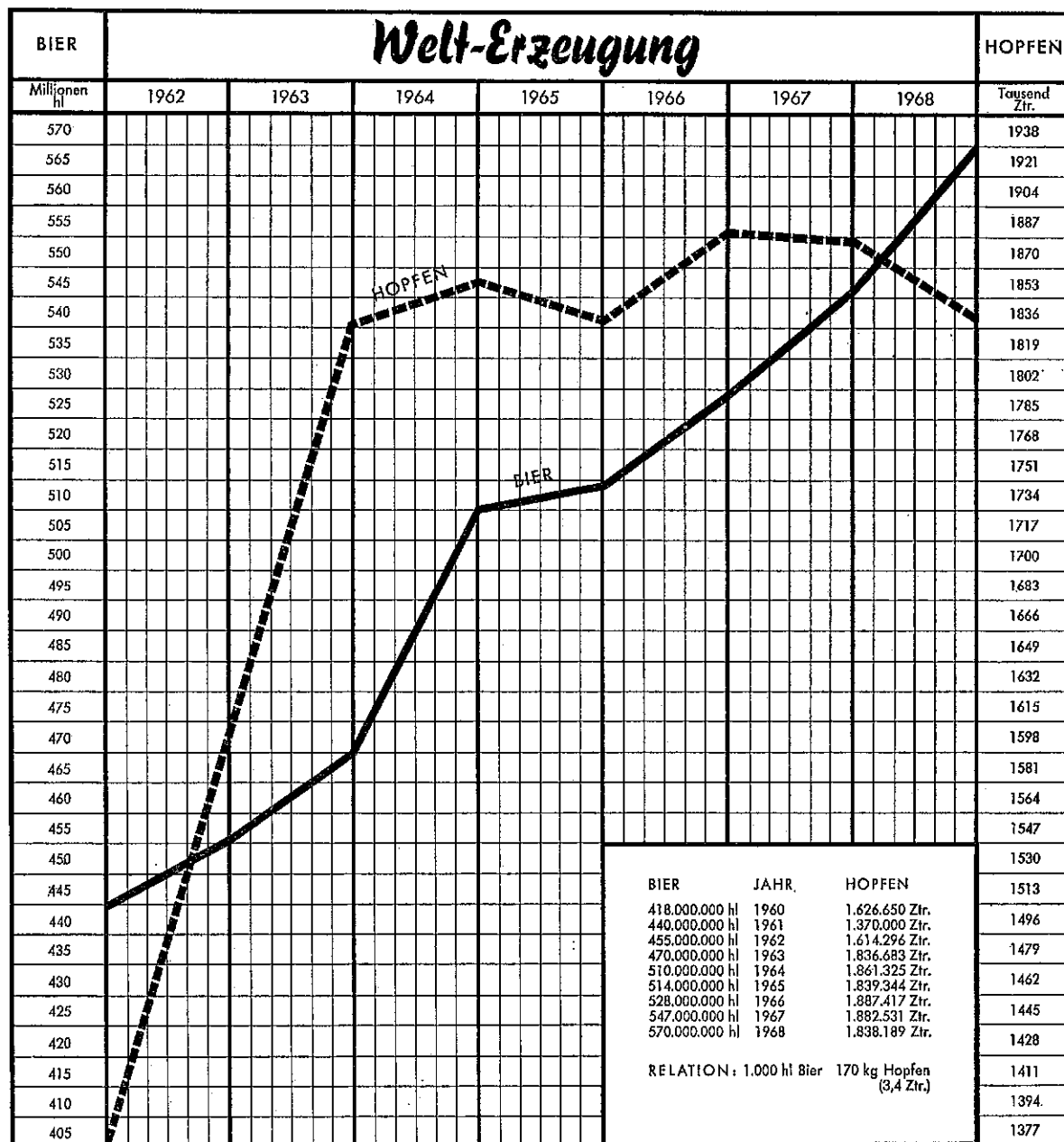
Acreage, Yield and Production 1967 and 1968

	Acreage 1967 Acres	Yield Pounds per acre	Production 1967 Pounds	Acreage 1968 Acres	Yield Pounds per acre	Production 1968 Pounds
Hallertau	21,750	1,771	38,524,613	22,350	1,704	38,078,623
Spalt	2,582	1,460	3,769,645	2,622	1,544	4,047,535
Hersbruck	1,149	1,411	1,621,373	1,045	1,236	1,291,675
Jura	652	1,690	1,102,300	650	1,750	1,137,353
Bavaria	26,133	1,722	45,017,931	26,667	1,671	44,555,186
Tettnang	2,258	1,736	3,919,338	2,310	1,524	3,520,085
Württemberg	123	1,079	132,717	77	923	71,098
Baden	59	1,233	72,752	59	1,147	67,681
Rheinpfalz	52	1,026	53,351	47	797	37,478
Germany (West)	28,625	1,718	49,196,089	29,158	1,655	48,251,529**)
Germany (East)	5,318	1,234	6,563,314	5,327	917	4,885,394
Saaz (Zatec)	17,025	715	12,172,258	16,578	833	13,818,874
Auscha (Ustek)	3,583	705	2,525,369	3,608	874	3,152,578
Other Districts	1,297	1,085	1,406,976	1,433	1,104	1,581,800
Czechoslovakia	21,905	735	16,104,603	21,619	858	18,553,252
Alsace	2,520	1,392	3,508,841	2,471	1,256	3,103,415
Burgundy	222	1,234	273,921	222	1,379	306,219
Flandres	544	1,722	936,955	544	1,433	779,657
France	3,286	1,436	4,719,717	3,237	1,294	4,189,291
Alost	927	1,653	1,532,197	927	1,573	1,457,792
Poperinge	1,630	1,805	2,941,708	1,754	1,592	2,793,228
Vodelée	79	1,116	88,184	79	1,116	88,184
Belgium	2,636	1,730	4,562,089	2,760	1,572	4,339,204
Slovenia	6,042	1,102	6,656,349	6,353	1,044	6,632,539
Backa	3,771	1,374	5,180,810	3,079	1,382	4,254,878
Jugoslavia	9,813	1,206	11,837,159	9,432	1,154	10,887,417
Austria	267	1,177	314,266	267	1,194	318,895
Gallcia	425	419	178,242	358	546	195,548
León	1,826	1,174	2,144,084	1,829	1,368	2,501,890
Cantábrico	346	789	273,150	284	875	248,458
Spain	2,597	999	2,595,476	2,471	1,192	2,945,896
Switzerland	32	1,481	47,399	32	1,175	37,588
Roumania	1,977	624	1,234,576*)	1,977	633	1,251,111
Bulgaria	2,891	428	1,236,780	2,891	384	1,108,914
Hungary	1,730	712	1,232,261	1,433	590	846,015
Poland	5,140	1,006	5,169,787*)	5,476	809	4,431,246
USSR	29,652	520	15,432,200	25,451	801	20,392,550
Continent	115,870	1,038	120,245,716	111,531	1,098	122,438,303
Kent	10,240	1,267	12,974,071	9,671	1,165	11,266,939
Hants	618	1,447	894,626	593	1,420	842,047
Surrey	89	1,242	110,560	82	1,331	109,128
Sussex	1,643	1,192	1,958,126	1,559	1,185	1,848,006
Herefordshire	4,514	1,223	5,521,972	4,085	1,349	5,510,618
Worcestershire	2,048	1,281	2,623,694	1,927	1,408	2,713,863
England	19,152	1,257	24,083,049	17,917	1,244	22,290,601
EUROPE	135,022	1,069	144,328,765	129,448	1,118	144,728,904
Washington	19,400	1,680	32,204,025	19,101	1,510	28,841,018
Oregon	4,900	1,490	7,300,974	4,500	1,480	6,659,986
California	1,799	1,941	3,491,976	1,500	1,660	2,489,985
Idaho	3,600	1,810	6,516,026	3,299	1,740	5,741,991
U.S.A.	29,699	1,667	49,513,001	28,400	1,540	43,732,980
Canada	951	1,632	1,552,038	954	1,571	1,498,797
Victoria	600	1,120	672,403	600	1,341	804,679
Tasmania	1,574	1,730	2,723,232	1,478	2,033	3,004,980
Australia	2,174	1,562	3,395,635	2,078	1,833	3,809,659
New Zealand	665	1,579	1,049,941	610	1,327	809,309
Japan	4,610	1,527	7,039,288	4,610	1,572	7,246,630
Manchuria	247	402	99,207*)	247	402	99,207*)
Northern-Korea	1,235	143	176,368*)	1,235	143	176,368*)
Argentina	316	802	253,529	610	658	401,237
South Africa	259	400	103,616	336	379	127,426
WORLD	175,182	1,184	207,511,388	168,528	1,202	202,630,517

*) Estimate

**) Official Weight March 8th, 1969

Because of cool and rainy weather during the formation of the cones and ripening of the hops, a quantitative abundant, but qualitative below average crop could be expected. The bittervalue was generally somewhat higher than the year before, especially Saaz hops had an unusually high alpha content. Especially disappointing was the bittervalue of the US-hops, which otherwise belong to the varieties with the highest possible bittering content. In this year too, it could be observed that the deterioration of the hops had set in already at an early date. Aroma hops were more affected than varieties with a high bitter value.



Contrary to last year, climatic conditions in 1968 were characterized by an unusual cool and rainy summer, calling for some anxiety regarding the expectation of the crop. A relatively mild winter was followed by an extraordinary warm and sunny spring, so that **uncovering** and **cutting** could be concluded during the first week of April. Apart from a few locally limited exceptions, the hops had wintered well. Afterwards changeable weather and especially cold nights hampered the growth considerably. Warmer weather with high summerly temperatures at the end of April caused a very quick and strong development of the young shoots.

FED. REP. OF GERMANY
Growth 1968

Favourable weather conditions benefited the appearance of **Downy Mildew** and preventive sprayings in all the growing districts, also against pests had to be applied. Falling temperatures with **nightfrosts** in May led to a standstill of the growth, whereby the timely advantage in the development of the hops was nearly equalized.

In mid-June 1968 an unusual rainy and cool weather set in, lasting with short interruptions only, until after the harvest. Under these conditions, growth was favoured, however, the control of pests and diseases was considerably more difficult. An extraordinary danger arose from **aphids**, which, despite of rainy weather appeared already very strongly in May/June and became immune to almost all control measures, in use today. The bines reached the height of the trellises at the end of June and showed a good set of laterals. At this time **early varieties** came into **burr**. In mid-July the hops were in **full bloom**. The yards showed a healthy stand. Warmer temperatures at the end of July favoured the change from bloom to the **formation of the cones**. The ample present cones started, however, just in the upper part of the bines.

Cool weather and sufficient rainfalls during the first half of August hampered the further development of the cones. Only a considerable change of the weather in the last third of August, favoured the development of the cones and the ripening once more, so, despite an average set of cones, a good crop could be expected.

Picking started generally on August 30th. The harvest was partly favoured through good weather. Extreme difficulties were caused through muddy soil in the hop yards. The crop was finished mid-September.

HALLERTAU. In this district growth was favoured through high summerly temperatures. The therefrom originated gain in development of two weeks against normal years, was, however, equalized through very unfavourable weather during the following month. A **hailstorm** on July 6th, struck parts of the Eastern Hallertau district, causing various damages. **Downpouring precipitations** between August 2nd and 15th made the hop yards partly impassable and the control of the strongly appearing aphids, as well as Downy Mildew most difficult. Climatic conditions benefited especially **Verticillium Wilt**, which resulted in a much stronger evidence contrary to last year, causing an estimated loss of approx. 20,000 cwts.

Weather data from the Experimental Hop Farm Hüll/Hallertau							
1968	March	April	May	June	July	August	Sept.
Precipitations per month (mm)	39	39	91	107	77	275	88
Monthly average of air temperature °Celsius	3.5	8.4	11.7	15.8	15.9	15.6	12.7
Maxima of air temperature °Celsius	9.2	15.4	16.8	21.6	21.6	20.3	18.1
Minima of air temperature °Celsius	- 2.0	2.1	5.2	9.5	9.9	11.3	8.0
Monthly average of relative humidity %	76	70	74	75	76	85	82

Quality. Hallertau hops, crop 1968 were of short growth and of green-yellowish colour. The light lupulin had a fine aroma, but the bittervalue was somewhat lower than the year before. Despite the wet weather, kilning of the hops was satisfactory and machine picking, too, gave reason for complaints in some cases only.

SPALT. The best part of the weather for the development of the hops was registered in spring. Apart from a few damages caused by storm and high winds, the hop yards were not exposed to violent weather. The long lasting rainfalls during the summer months made it extremely difficult to control pests and diseases. Intensive sprayings against **aphids** had to be repeated several times in order to prevent damages on the plants.

Quality. The cones of Spalt hops were of middling size and yellowish-green colour with occasional wind whipping. The light lupulin had a fine, strong aroma and was more plentiful than the year before. The drying, as well as the picking of the hops could again not always satisfy.

TETTANG. In this district summerly weather with partly sultry precipitations determined the growth of the hops. **Downy Mildew** showed scarcely any evidence through regular sprayings, the control of **aphids**, however, caused considerable difficulties. The district was exempted from hail and damages by storm.

Quality. Tettang hops, crop 1968 had unequal, middling sized cones of green to yellowish-green colour. Wind whipping was to be noted. The light lupulin with a fine aroma was somewhat richer than the year before. Picking and drying of the hops was generally acceptable.

HERSBRUCK GEBIRGE. In this district too the growth of the hops was benefited by warm and summerly spring weather. On May 6th, a thunderstorm together with hail, caused local damages. Cool weather in July hampered the formation of the cones, especially on early varieties. Strong winds on July 11th/12th damaged the bines and laterals in many hop yards. Against **Downy Mildew** regular sprayings were effected. The control of **aphids** turned out to be difficult, since abundant rainfalls until mid-August, as well as muddy soil made it nearly impossible to apply a short-dated spraying series. The formation of the cones, especially on late varieties, was favoured from warmer weather, improving the crop aspects.

Quality. The cones of the Hersbruck Gebirge hops, crop 1968, were of small growth and green colour. The late varieties showed larger cones of yellowish-green colour with ample lupulin content. The drying of the hops was satisfactory, the machine picking, however, should be still improved in some cases.

The official estimate of the German crop took place from August 23rd to August 28th, 1968, and resulted in the following figures:

**Crop Estimate
1968**

	Yield estimated 1968 lbs.	Yield weighed on March 8, 1969 lbs.
Hallertau	36,927,050	38,078,623
Spalt	3,968,280	4,047,535
Tettang	3,747,820	3,520,085
Hersbruck Gebirge	1,488,105	1,291,675
Wurttemberg	99,207	71,098
Jura	1,102,300	1,137,353
Baden	77,161	67,681
Rheinpfalz	44,092	37,478
	<u>47,454,015</u>	<u>48,251,528</u>

In comparison with the past two years, where a considerable deviation between the official estimate and the figures of the real harvest was to be noticed, the estimated figures of crop 1968, however, must be considered especially exact. The work of the estimate commission has become even more difficult, because of the existence of unregistered acreage and explains at least partly the above mentioned deviations.

As already in the past year, the purchase of crop 1968 started under a nearly saturated market. The generally well stocked breweries were still under the impression of the releasing recession and there was little inclination to cover uncertain requirements, considering the safe supply with hops of the new crop.

**Hop Purchase
Crop 1968**

The disappointing crop results during the first days of the harvest, especially in the Hallertau, spread doubts that the forward contracts could be fully realized and the estimated figures could be reached. Whereas in Spalt and Tettang a steadily rising activity for free available hops was to be noted, the purchase in the other districts, especially in the Hallertau, was confined to the taking over of quantities delivered above contracts.

On the basis of production costs, being below normal prices, farmers were reluctant to sell. The strong reserve of the buyers caused the opinion that considerable quantities of crop 1968 would be unsaleable. Although particular pressing purchases did not occur at any time, all districts, however, were sold out at an early date. It can be assumed that the contract share was larger than generally supposed.

HALLERTAUE. Purchase set in with some delay, showing only a small turnover. For quantities delivered above contracts DM 250.— were paid. Prices developed as follows:

	9/24	9/26	10/3	10/10	10/15	10/24	10/31	11/7	11/14
DM	260.—	300.—	260/280.—	270/280.—	270/280.—	270/280.—	270/260.—	260/250.—	220/230.—

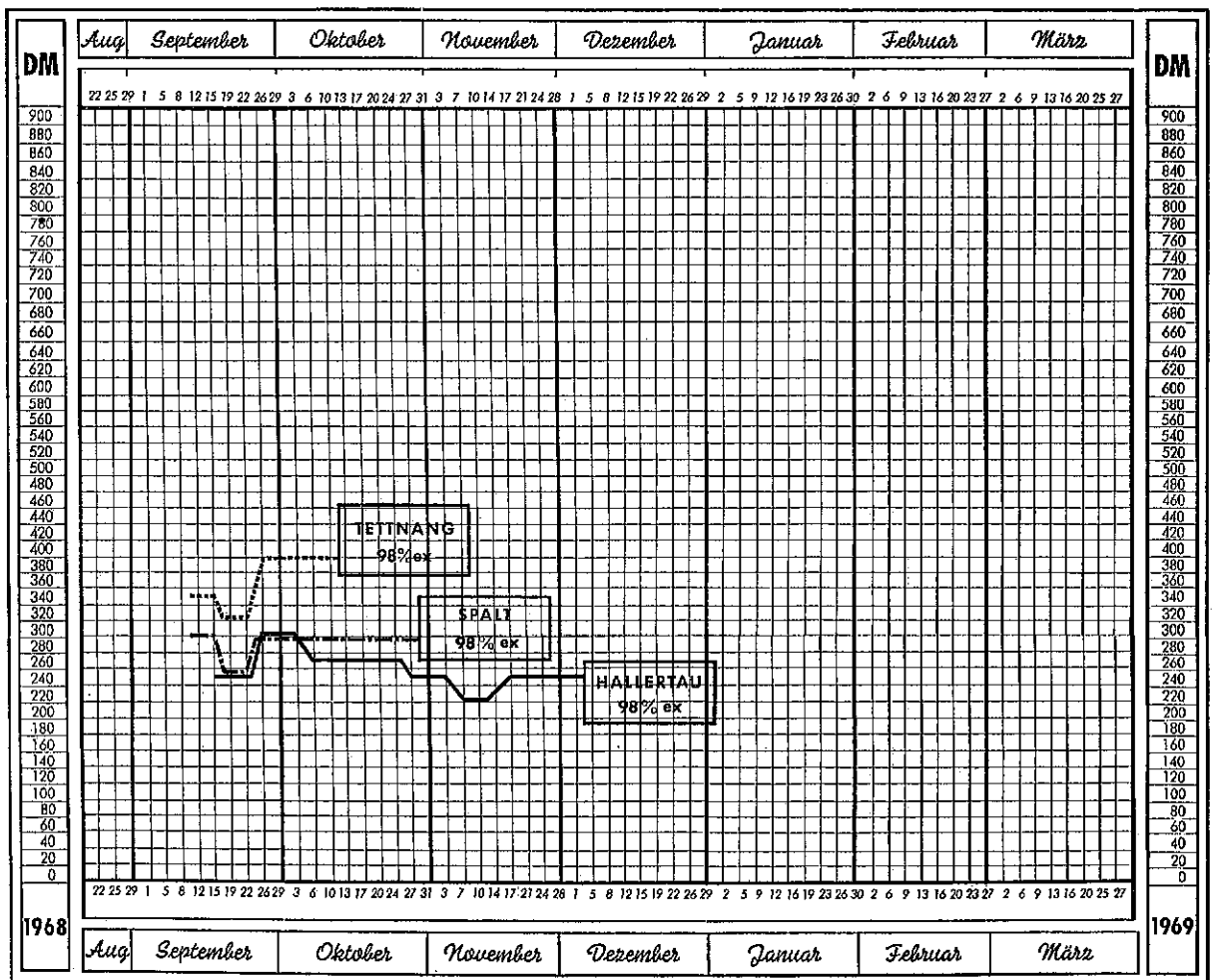
The above mentioned prices referred to good average hops of crop 1968. As a consequence of the cold and wet weather in July and August, the portion of lower quality was relatively high. For these hops lower prices were paid, whereas better prices could be obtained for first qualities. Therefore prices were differentiated into quality groups.

The lowest level was reached around mid-November, but prices could somewhat recover during the proceeding sellout.

SPALT. It was interesting to note that at the beginning of purchasing, quotations for Spalt hops were on the same level as Hallertau hops. Only at the end of September a tendency towards the usual price difference was to be noticed. The development of the prices was as follows:

	9/13	9/24	9/26	10/3	10/10	10/16	10/24	10/31	11/7
DM	250.—	260.—	300.—	300.—	300.—	300.—	300.—	300.—	300.—

During the process of a lively business activity, the district was sold out at the beginning of November whereby prices quoted since the end of September remained unchanged.



TETT NANG. In this district, in which purchasing is already starting usually at a very early date, first larger purchases were effected in the middle of September. Quotations were as follows:

	9/20	9/24	10/3	10/10	10/16	10/24
DM	310/320.—	340/350.—	400.—	400.—	400.—	400.—

Similar to Spalt, constant purchases were effected, at prices remaining unchanged since the beginning of October. At the end of that month, the district of Tett nang could be considered to be sold out.

HERSBRUCK GEBIRGE. At the beginning of purchasing about mid-September, only small business activity was noted. As the following table shows, prices increased slightly during October, but went down again around the end of the month to DM 230.—.

	9/20	9/24	10/3	10/10	10/17	10/24	10/31
DM	200.—	220.—	230.—	230/250.—	250.—	250.—	230.—

Remaining quantities went into second hand at the beginning of November.

All quotations as mentioned above are gross prices and refer to hops ex stocks of farmers.

The low requirement of the brewing industry also influenced the Nürnberg Market. Supply and demand kept within narrow limits with little trading. Inquiries were for information purposes only.

**Nürnberg
Market**

It was evident that the added value tax, which replaced the former favourable export supports, had reduced the importance of the Nürnberg Market. Available supplies from first hand sources were preferred, because purchases via the Nürnberg Market proved more expensive.

Trade activity increased beginning 1969, following progressive clearance of the growing districts with increased price differences based on quality, analogous to purchases from farmers.

The following is an informative summary of the price development:

Date	Hallertau	Spalt	Tett nang	Hersbruck
9/ 6/68	DM 290.—/295.—	380.—	—	—
9/20/68	295.—/305.—	295.—	380.—*)	235.—*)
9/27/68	325.—/330.—*)	320.—	445.—	260.—
10/ 4/68	320.—	340.—/330.—	445.—	265.—
10/11/68	320.—/310.—	325.—/330.—	440.—	265.—/270.—
10/18/68	310.—/300.—*)	330.—	445.—	270.—/280.—*)
10/25/68	295.—/305.—	330.—/335.—	—	—
11/ 1/68	290.—	325.—/330.—	—	—
11/15/68	275.—/280.—	—	450.—	—
11/29/68	275.—/270.—	330.—/325.—	455.—/450.—	250.—

*) quotations are nominal only, because no transactions were made at the time mentioned.

The above quotations are per 50 kilos net, plus added value tax, packing excluded, ex warehouse.

Since the second half of April, 1969, the Nürnberg Market could not make any more deliveries. The German hop crop 1968 was completely sold out.

Beginning with February, 1969, the Nürnberg Market showed an increased interest in future contracts, as well as in crop 1969 only and also contracts over several years.

Verification of the hop acreage in 1968, resulted in the following figures:

**Hop Acreage
1968**

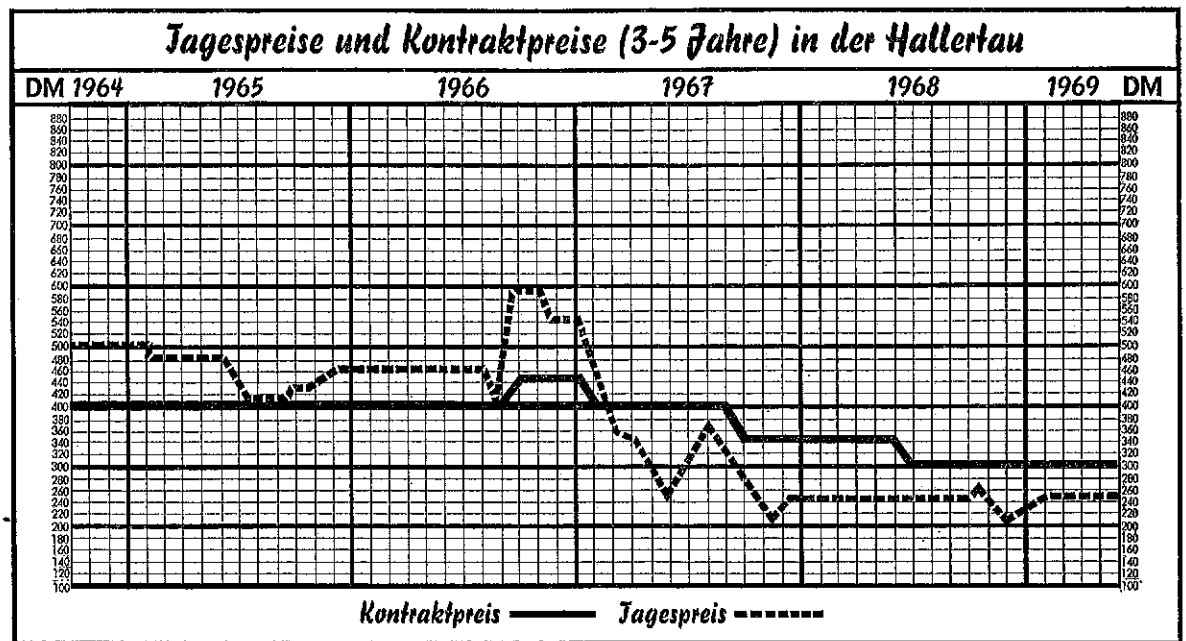
Districts	1939 Acreage acres	1968		Total acres
		Existing acr. acres	Additional acr. acres	
Hallertau	11,317	21,584	766	22,350
Spalt	2,276	2,501	121	2,622
Hersbruck	2,118	998	47	1,045
Jura	200	620	27	647
Other districts	200	32	—	32
Bavaria	16,111	25,735	961	26,696
Tett nang	1,636	2,224	86	2,310
Wurttemberg	1,223	77	—	77
Baden	440	59	—	59
Baden-Wurttemberg	3,299	2,360	86	2,446
Pfalz	151	47	—	47
Rheinland-Pfalz	151	47	—	47
Germany	19,561	28,189	1,047	29,236

It can be assumed that in the **Hallertau** about 1,853 acres are assigned to hop varieties with a high bittervalue; in **1969** the acreage is estimated to be about 2,224 to 2,471 acres.

In the other hop growing districts varieties with a high bittervalue are only planted in unimportant quantities.

**Hop
Market**

The stabilizing effect of forward contracts, extending over several years is no longer being questioned. The following presentation of the current and the future contract price development from 1964 to 1968 shows the slight fluctuations of the latter:



Naturally the retrograde prices for free available hops during the last two years did influence the contracts, which created considerable concern among the hop growers.

While the growers see their existence threatened by proceeds which do not cover their expenses and urge quick relief through European Common Market regulations or through national measures, the purchasers point out that only those quantities not contracted for in the respective harvests are affected by the price decline, because former contracts were concluded at favourable prices.

The possible height of the producer prices should not be considered in isolation, since they are determined by **supply and demand on the world market**. The necessity of increased productivity and cost reduction through rationalizing and planting of hops with higher yields and resistant against diseases, has already been recognized. However easily understood this might be, here lies the real reason for the hop overproduction of the world market, starting with the acreage increases of the German market, as is demonstrated by the following figures:

The German hop acreage was increased from 20,768 acres in 1960 to 29,236 acres in 1968. In contrast, the number of hop growers decreased from 14,454 in 1960 to 10,926 in 1968.

The number of small hop growers, i. e., those working with high production costs an acreage of less than 2.471 acres, has considerably decreased, whereas those growers, working more than 2.471 acres have increased.

In the late autumn 1968, the Bundesminister für Ernährung, Landwirtschaft und Forsten ordered a study of the German hop market. The creation of a stabilizing fund is recommended, to be supported by levies on each cwt. of hops, to be paid in equal parts by the growers and the purchasers. In spring 1969, the Ministry of Agriculture submitted a draft of a corresponding **hop economy law**, the passing of which no longer can be counted on during the current session of the legislature. Furthermore, it is questionable whether such a law would not be replaced by the hop market regulation of the European Common Market expected in 1969/70.

The German Hop Business Agreement (D.H.G.V.) concluded between representatives of the hop growers and the trade proved appropriate during the past season. The biggest benefit for both parties lies in the clarification of mutual rights and duties regarding quality questions, thereby preventing litigation.

German Hop Business Agreement (D.H.G.V.)

While there were 146 arbitrations in 1967/68, in 1968/69 there were only 83.

The considerable increase in the German export credit balance in 1968, caused growing pressure from abroad toward a revaluation of the German Mark. In order to avoid an unilateral change in the parity of the DM with other currencies, however, the Federal Government decided in November 1968, upon tax measures, which should have the same effect.

Foreign Trade Security Law

The Foreign Trade Security Law, in effect since December 1st, 1968, and lasting until March 31st, 1970, provides the following measures:

1. **Imports will be cheaper.** Merchandise with an added value tax rate of 11 % receives a refund of 4 %; that with a tax rate of 5.5 % a refund of 2 %. The refund applies to all payments of import duties after November 20th, 1968.
2. **Exports will be more expensive.** Merchandise with an added value tax rate of 11 % (hop extract) is being taxed with another 4 %; that with a tax rate of 5.5 % (hop and hop powder) with another 2 %. This surtax applies to all exports between November 29th, 1968, and March 31st, 1970. Only those export deliveries contracted for prior to November 23rd, 1968, and completed prior to December 23rd, 1968, remain tax free.

Those agricultural products, for which there is a European Common Market regulation, are excepted. Hops and refined hop products are not among them.

By the end of April/beginning of May, 1969, rumours spread again about the unavoidable revaluation of the DM, resulting once more in a forceful influx of foreign currencies into the Federal Republic. Even the Federal Bank found it necessary to temporarily suspend the purchase of foreign currencies. The Federal Government did avoid this time too the predicted revaluation and intends the extension of the Foreign Trade Security Law beyond March 31st, 1970, for an undetermined period of time. At the same time, internal measures for limiting the economic steam are being considered.

Export of Hop Extracts			
	Total in lbs.	Percentage of Total	
		German Export	Export "in bond"
1966 9/1/66 — 8/31/67	1,451,742	20.47 %	79.53 %
1967 9/1/67 — 8/31/68	1,555,580	31.10 %	68.90 %
1968 (7 months) 9/1/68 — 3/31/69	1,416,027	51.94 %	48.06 %

Export of Hop Extracts

Whereas in 1960 the German export of hop extract was still somewhat below 220,460 lbs., in 1967 altogether 1,555,580 lbs. were exported. In the first seven months of the season 1968/69 exports reached already 1,416,027 lbs. The allotment of German hops destined for extraction was still above 70 % in 1960, went down to an average of 28—30 % and rose above 50 % because of low hop prices in 1968.

From September 1st, 1968, until March 31st, 1969, hops were imported as follows:

Country	Domestic Consumpt.	Refinement transit	Country	Domestic Consumpt.	Refinement transit
	lbs.	lbs.		lbs.	lbs.
U. S. A.	1,157,195	358,248	b. f.	3,744,733	4,058,228
Jugoslavia	1,110,677	1,065,924	Spain	—	219,358
Czechoslovakia	982,590	799,829	Poland	—	126,324
Belgium-Luxembourg	373,239	772,933	Austria	—	87,964
France	121,032	1,061,294	Other Countries	5,291	114,419
c. f.	3,744,733	4,058,228	Total	3,750,024	4,606,293

German Hop Imports Crop 1968

Imports crop 1967 until March 31st, 1968 = 4,761,715 lbs. / transit 3,982,610 lbs.

**Exports of Hops/
Powder and
Extracts
Crop 1968**

From September 1st, 1968, until March 31st, 1969, exports of Hops/Powder and Extracts were as follows:

Country	Hops/Powder lbs.	Extract lbs.	Country	Hops/Powder lbs.	Extract lbs.
Belgium	875,667	60,847	b. f.	12,896,797	1,263,237
France	852,298	438,274	Madagascar	38,580	—
Austria	802,033	51,147	Sudan	37,478	—
Italy	665,348	208,555	Tanzania	37,478	—
Sweden	564,929	24,030	Ethiopia	30,864	4,409
Czechoslovakia	545,638	—	Angola	30,644	2,205
Switzerland	408,733	152,117	Mozambique	22,928	—
Denmark	406,969	38,580	Ruanda-Burundi	20,944	—
Finland	305,337	12,125	Ivory Coast	13,228	1,543
Spain	297,621	58,863	Togo	9,480	—
Great Britain	293,653	12,125	Libya	6,614	—
Netherlands	214,066	153,881	Malawi	6,614	1,984
Portugal	157,629	—	Dahomey	6,614	2,205
Norway	128,308	2,425	Zambila	—	4,850
Greece	66,138	882	Rep. of South Africa	4,630	1,102
Rep. of Ireland	33,289	—	Gabun	4,630	—
Malta	10,141	—	Ghana	4,410	6,173
Europe	6,627,797	1,213,852	Upper Volta	4,410	661
U.S.A.	5,350,564	9,700	Liberia	4,410	1,984
Brazil	214,948	—	Nigeria	3,748	37,478
Argentina	87,082	—	Tunisia	—	11,023
Uruguay	40,785	—	Africa	704,373	93,916
Mexico	39,683	—	Japan	1,058,649	—
Canada	24,030	—	South-Vietnam	194,005	19,841
Venezuela	22,487	—	Thailand	155,204	—
Bolivia	18,739	441	Philippine Isl.	126,544	13,007
Panama Canalzone	18,739	—	Taiwan	119,048	—
Dominican Republic	11,023	—	South-Korea	50,706	—
Nicaragua	6,614	—	Iran	33,069	—
French Antilles	6,614	—	Hongkong	18,739	—
Costa Rica	6,614	2,205	Indonesia	16,535	5,291
Peru	4,409	2,205	Ceylon	12,125	661
Chile	—	16,535	Lebanon	8,818	441
America	5,852,331	31,086	Malaysia	7,716	—
Canary Islands	151,015	2,205	Asia	1,801,158	39,241
Algeria	82,452	—	Australian Isl.	441	18,519
Kenya-Uganda	65,697	13,228	Australia	441	18,519
Congo-Kinshasa	64,595	2,866	Other Countries	18,739	18,960
Morocco	52,910	—	Total	15,004,839	1,415,574
c. f.	12,896,797	1,263,237			

Exports crop 1967 until March 31st, 1968 = Hops / Powder 15,294,964 lbs. / Extracts 988,984 lbs.

**EUROPEAN
ECONOMIC
COMMUNITY
(E.E.C.)**

For the political and economic amalgamation of the European Economic Community 1968 was a year of stagnation. Important basic issues remained unsolved.

It becomes ever more clearly evident, that the support structured agricultural politics lead to surpluses, which cannot be readily cashed in and that they are in need of a change. The removal of the disparity of the currencies, too, presents a pressing problem.

**Hop Market
Regulation**

According to the Roman Treaties the hop market regulation will come into force on January 1st, 1970. The EEC-Commission in Brussels will therefore soon have to submit proposals to the Ministry Council in order to meet this date.

The until recently divergent views of the hop growers on the one hand and the brewing industry and trade on the other, could be resolved through far reaching mutual compromises. This rare procedure in the European Economic Community agricultural politics has to be welcomed. It will facilitate the Commission's processing of the proposals.

One is guided by the proposal to put at the disposal of the growers a global fund, which is to produce at least a partial adjustment of prices that do not cover costs. In order not to encourage additional acreage, the amount is to be determined annually and always only 7 to 8 months after the harvest. Payment has to be made out of the FEOGA-fund (Fonds Europeen d'Orientation et de Garantie = European Orientation and Guaranty Fund).

Otherwise it is intended to keep a free hop market and only to set up general rules of competition, standards of quality and designations of origin and to include into the market regulations all refined hop products.

The creators of the projected market regulation will have to carefully avoid any violations of the GATT regulations.

**Tariff
Union**

Although the tariff union took effect on July 1st, 1968, some agricultural products for which no market regulations have been enacted as yet, are still subject to domestic duties. Among them are **hops**, for which the tariff rates set forth in the following schedule are still in force.

Country	Customs Duties for Imports from					
	Members of the E.E.C.			other countries		
	Basis 1957	from 7/1/67	from 7/1/68	from 1/1/66	from 7/1/68	1/1/1972*
Belgium . . .	8 %	2 %	2 %	10.4 %	10.4 %	9 %
Germany . . .	15 %	3.7 %	3.7 %	13.2 %	10.8 %	9 %
France . . .	12 %	3 %	3 %	12.0 %	10.8 %	9 %
Italy	4 %	1 %	1 %	8.8 %	10.8 %	9 %
Luxembourg	8 %	2 %	2 %	10.4 %	10.4 %	9 %
Netherlands	8 %	2 %	2 %	10.4 %	10.4 %	9 %

*) The E.E.C. Common Custom Tariff will be reduced on 1/1/70 to 10.2 %, on 1/1/71 to 9.6 % and will arrive at 9 % on 1/1/72.

The growing season 1968 was characterized by extreme weather conditions in the several districts. Despite irrigation, damages through **dryness** in July could not be prevented. **Hails and storms** led locally to a loss of yield. Weather conditions on the average were as follows:

	March	April	May	June	July	August	Sept.
Precipitations	32	42	49	63	42	64	62 mm
Temperatures	4.4	9.2	11.2	16.6	16.9	16.9	13.8° C

The plants reached the height of the trellises around mid-July and showed, affected through the dryness, only a fair overhang. **Bloom** set in at the end of July. Against **Downy Mildew** 6 to 8 sprayings were effected. Considerable damages were caused by **aphids**, as the used insecticides could not come to full action, owing to the dryness. A higher reduction of the crop could be avoided through additional control measures. **Verticillium Wilt** was not noted any more.

Picking started generally on August 26th and was mainly finished on September 15th, despite some short interruptions through rainfalls. Lack of labour was especially noticed there, where no picking machines were available.

The **quality** of the hops was better especially with regard to the bitter value as against the year before and was graded as follows: 12.5 % of grade II, 73 % of grade III, 12.8 % of grade IV and 1.7 % of grade V. The export business being unimportant, the hops were almost exclusively available for the local brewing industry. Import quantities had not changed against the year before.

As announced, the division hop cultivation of the Friedrich-Schiller-University in Jena succeeded after several years of trials to grow a new hop variety, named "SALADIN", special features of which are said to be higher yields of about 661 lbs. to 882 lbs. per acre, as well as a higher bitter value as against Czech Saaz roots.

The hops had wintered well and soil moisture was sufficient. **Spring work** could be started in the second half of March under generally favourable weather. Precipitations were distributed as follows:

	March	April	May	June	July	August	Sept.
Saaz	30.1	53.3	33.5	91.9	41	64.3	53.4 mm
Auscha	22.8	38.9	44.7	60.7	100	62.8	89.3 mm

The good development of the plants under sunny and warm weather in April was hampered through mostly cool temperatures and rainfalls in May. High summerly temperatures in June benefited the growth of the bines extraordinarily. The hops had reached the height of the trellises and showed plentiful **burr** in mid-July already. At the end of July, however, a cool and rainy spell set in. **Downy Mildew** appeared sporadically and was carefully controlled. Sometimes planes were used for the sprayings.

Picking started on August 20th, had, however, to be interrupted as a consequence of the political situation, which caused lack of labour. Only after some time picking set in again and was finished despite unfavourable rainy weather in mid-September. 330 picking machines were used to harvest about 47 % of the crop.

Quality. The cones were of middling size and even green colour. The bitter value was higher than the year before, as the hops could better ripen through the delayed picking. The crop was graded as follows: 87 % of grade I and II, 13 % of grade III.

The home breweries accepted 71,314 cwts. of hops. Imports were about 10,000 cwts. of hops, crop 1968, exports came to 107,000 cwts.

DEUTSCHE
DEMO-
KRATISCHE
REPUBLIK
(D. D. R.)

CZECHO-
SLOVAKIA

POLAND

The growing period 1968 was marked from rather variable weather conditions. The extremely warm and sunny weather in March until the beginning of May led to a quick growth of the plants, which was hampered by excessive rainfalls and a noticeable cold spell during the second half of May. Precipitations and temperatures were as follows:

	March	April	May	June	July	August	Sept.
Precipitations	31.9	44.4	93.9	88.0	97.0	60.0	56.0 mm
Temperatures	2.4	9.4	12.6	18.4	16.9	17.4	13.7° C

Under steadily increasing improvement of the weather, the hops reached the height of the trellises at the end of June and stood in full bloom by mid-July. The at this time prevailing heat led to heavy hailstorms, causing damages on abt. 75% of the acreage and contributed considerably to the decrease of the crop result. Rainy weather and variable temperatures since mid-July favoured pests and diseases, control of which was made very difficult due to the muddy soils. Despite the unfavourable weather in August, hop yards showed a healthy stand and the development of the cones could be considered good, especially in the upper part of the bines.

On account of the weather conditions, picking set in somewhat later on August 26th and was finished on September 20th. 95% of the crop were picked by hand.

Quality. The cones were of even growth, yellowish-green colour and had a higher content of lupulin than in the years before. The crop was graded as follows: 68% of grade I, 30% of grade II and 2% of grade III. Prices to farmers are fixed already before the harvest. In 1968, 97 Zloty for grade I, 80 Zloty for grade II and 45 Zloty for grade III were paid per kilo.

A quantity of ab. 8,000 cwts. was exported, whereas 1,740 cwts. were imported.

SOVIET UNION

According to branch literature, the total hop acreage in the Soviet Union is said to amount to 25,451 acres. The main district, the Ukraine, is considered to be the largest with 14,826 acres. Smaller growing districts with approx. 6,178 acres are near Brjansk and Kursk, and in the Altai Mountains of Siberia. The hop cultivation in the Autonomous Republic Tschuvash in the North East of Moscow is estimated about 4,448 acres. An enlargement of this acreage up to 7,413 acres is planned.

The older hop yards were installed with a distance between hills of 1.60 x 1.00 meters and 1.60 x 1.60 meters amounting to approx. 60% of the acreage. In the new hop yards, the distance of hills has been expanded to 2.10 x 1.00 meters. The hop yards are planted with middle early red hops, specified as "CLONE 18". In 1968 a crop of 185,000 cwts. shall have been harvested, conforming to an average yield of 801 lbs. per acre. The first governmental Research-Institutions were founded in 1963. These institutions are mainly occupied with the growth of early and middle-early red hops, intending not only a higher yield, but also a better quality.

The total hop purchases are centralized and handled in the Ukraine through the states enterprise "Ukrchmel", situated in Shitomir. The hops from other growing districts are handled through the local packing plants. In the U. S. S. R. hops are only grown to cover the needs of the home brewing industry. According to plans for an increase of the beer consumption as against other strong alcoholic beverages, the brewing industry shall be favoured and expanded, which might also result in an increase of hop acreage.

HUNGARY

The growing period 1968 turned out in two contrary periods. Warm and dry weather from March until mid-July caused damages especially on early varieties. Late varieties could mainly gain their loss under cooler and rainy weather from the second half of July until the end of August. Against Downy Mildew and pests 7 to 8 sprayings were effected. Precipitations were distributed as follows:

	March	April	May	June	July	August	Sept.
Precipitations	26.6	26	15	44.5	46.4	87	81.4 mm

As a consequence of the generally dry summer, the early varieties reached the height of the trellises only partly and remained weak and pointed. Bloom started already at the end of May and lasted until the beginning of July. For late varieties, bloom set in around July 10th, and precipitations in August were favourable for the formation of the cones. Cones developed also in the lower third of the bines, but remained weak and small.

Picking of the early varieties lasted from July 30th until August 15th, of late varieties from August 27th until September 15th. Because of the small crop, the allocation of labour made no difficulties. The harvest was hampered through rainfalls several times.

Quality. The early varieties were in colour and formation of the cones remarkably weaker than the year before. The late varieties, however, were more uniform in growth and of a better colour. The crop was graded as follows: 28.7 % of grade I, 36.4 % of grade II and 34.9 % of grade III.

The whole crop was consumed by the Hungarian brewing industry. In 1968 an additional quantity of 6,200 cwts. was imported.

The hops had wintered well, but suffered under lack of moisture during the very dry early summer 1968. Precipitations and temperatures were as follows:

BULGARIA

	March	April	May	June	July	August	Sept.
Precipitations	19.6	6.2	37.7	74.8	62.4	107.2	62.9 mm
Temperatures	5.4	13.7	19.0	19.4	21.2	19.4	17.0° C

The extraordinary **dryness** in April, May and June with temperatures up to 36° C, had unfavourably influenced the growth of the hops. In the district of Ichteman, hop yards were badly affected through failure of the irrigation system. The hops reached the height of the trellises only in part by mid-May and were in **bloom** at the beginning of June already. As a consequence of the dryness and premature burr, the bines remained pointed and weak. Several districts were strongly affected by **hail**, causing a substantial loss of the crop as against the year before. Six sprayings against **Downy Mildew** and **Red Spider** were effected.

Picking started at the end of July and was finished on September 5th. The weather was favourable during the first half of the harvest only. About 12 % of the crop were brought in by 8 picking machines. There was no lack of labour.

Quality. The hops of crop 1968 were judged weaker than the year before. As a consequence of the dryness, the cones were small and of yellowish-green colour with blemishes. The crop was classified as follows: 70 % of grade I, 22 % of grade II and 8 % of grade III.

As a result of the low hop production, 3,000 cwts. of hops had to be imported in order to cover the demand of the home brewing industry with about 10,060 cwts. An unimportant quantity was exported.

In the **SANNTAL (SLOVENIA)** the plants came without frost damages through the winter, but owing to the light snowfalls, the soil had not enough moisture. Under warm temperatures above average in March and April, **spring work** could be done in time. Precipitations and temperatures were distributed as follows:

JUGOSLAVIA

	March	April	May	June	July	Aug.	Sept.
Precipitations	5.1	35.1	114.8	155.1	79.1	119.8	162.9 mm
Temperatures	6.3	12.1	15.1	18.3	19.4	17.9	14.9° C

The continuous dry and windy weather in May and lack of soil moisture hampered the development of the plants. Abundant rainfalls at the end of May favoured the further growth of the hops. On June 16th the district was struck by a **heavy hail**, the estimated damage of ab. 7,000 cwts. contributed substantially to the diminution of the crop. Further 756 cwts. were destroyed through a warehouse fire.

After June 25th a tropical heat with temperatures of above 30° C set in, lasting until July 15th. At this time the hops had reached the height of the trellises and stood in full **bloom**. Preventive sprayings against **Downy Mildew** and especially against **Red Spider** had to be effected. On July 15th, the dry weather was followed by rainfalls, so that the plants could recuperate again. Despite changeable weather in August, the **formation of the cones** was favoured, especially in the upper part of the bines.

Picking started on August 18th and was finished on September 4th. The relatively dry weather made a quick harvest possible. 25 picking machines were in action.

The **quality** of the Styrian hops, crop 1968 was better than the year before. The cones were of even growth, green colour and had a high content of lupulin. The crop was graded as follows: 95.3 % of grade I, 4.3 % of grade II and 0.4 % of grade III. The domestic breweries received 6,740 cwts., whereas 52,860 cwts. of hops were exported.

In the **BACKA** rainfalls and temperatures were distributed as follows:

	March	April	May	June	July	Aug.	Sept.
Precipitations	17	14	23	38	69	115	43 mm
Temperatures	6.2	14.1	18.4	20.9	21.3	19.1	16.2° C

The hops had wintered well without frost damages. At the beginning of the growing period in April, May and June dryness was prevailing, which resulted in a weak development of the plants. At this time strong winds caused damages in the hop yards.

The hops reached the height of the trellises about June 15th and stood in **bloom** at the end of July. Five sprayings were effected against **pests** and **diseases**. Rainy weather in August benefited the development of the **cones**, which were especially uniform in the upper part of the plants and of normal size.

Picking started on August 27th and was finished on September 7th under relatively good weather conditions. 16 picking machines were in action.

Quality. The cones of the Backa hops, crop 1968 were uniform in growth, of good colour and rich in lupulin. The crop was graded as follows: 83.2 % of grade I, 15.7 % of grade II and 1.1 % of grade III.

The reduction of the acreage in the Backa from 3,771 acres to 3,079 acres is the consequence of the grubbing out of old hop yards. There were no new hop yards planted.

All export engagements could be fulfilled. The home brewing industry accepted 8,040 cwts.

AUSTRIA

In the district of **MUEHLVIERTEL** **spring work** could be started and finished under favourable weather conditions. The plants showed a quick and healthy growth. Mid-May, noticeably cool weather set in, causing frost damages in lower valleys. Under continuous fine weather, which was only occasionally interrupted through rainfalls, the bines reached the height of the trellises at the end of June and had a moderate overhang.

Careful sprayings had to be effected against **Downy Mildew** and the strong appearance of **aphids**. A rain period, setting in on July 11th and lasting until the end of August, was at first refreshing for the plants, but became disadvantageous later on for **bloom** and the **formation of the cones**.

Picking, which was done only by hand, started on August 30th and was finished under changeable weather on September 23rd. There was some lack of pickers. Colour and **quality** were only somewhat weaker than the year before. The formation of the cones was unequal. The crop was judged as follows: 92 % of grade I, 7 % of grade II and 1 % of grade III.

On an acreage of 94 acres a crop of 124,891 lbs. was harvested (1,328 lbs. per acre). According to contract, the whole crop was accepted by the home brewing industry.

In the district of **LEUTSCHACH**, the growing period of the plants was characterized by very warm weather from March until June and interrupted only sporadically by a few precipitations. Abundant rainfalls favoured the development of the hops from mid-July. Against **pests** and **diseases** the necessary control measures were carefully effected. The bines showed a good overhang and the cones on the lower third of the plants ripened too. Despite hail in early summer, the crop result was satisfactory in quantity as well as in quality.

Picking started at the end of August and was finished on September 10th. 75 % of the crop were picked by 10 picking machines. There were enough pickers available for the handpicking.

Quality was judged better than the year before and graded as follows: 80 % of grade I, 13 % of grade II and 7 % of grade III.

The whole crop was consumed according to contracts from the home brewing industry. On an acreage of 173 acres a quantity of 194,005 lbs. was harvested (1,121 lbs. per acre).

The growing period was characterized by changeable weather and precipitations above average in August. Precipitations were distributed as follows:

SWITZERLAND

	March	April	May	June	July	Aug.	Sept.
Precipitations	35.1	48.3	98.5	66.6	63.0	182.6	168.0 mm

The bines reached the height of the trellises at the beginning of July and were in **full bloom** about mid-July. The plants had not formed exuberant overhang as the year before and the cones in the lower third of the bines were missing. Intensive sprayings were necessary too to control after the bloom until the harvest obstinate attacks of **aphids**. **Downy Mildew** did not appear.

Picking started on August 26th and was finished on September 12th under occasional short interruptions by rain. The whole crop was handled by three picking machines.

Quality and colour of the hops were judged just as well as 1967. Despite of the unequal formation of the cones, the crop was graded to be 97 % of grade I and 3 % of grade II. On an acreage of 31 acres, a crop of 37,588 lbs. (1,175 lbs. per acre) was harvested.

Farmers obtained a price of Sfrs. 520.— for first quality and Sfrs. 500.— for second quality per 50 kilos and received a payment of Sfrs. 90.— per 50 kilos of hops from the Compensation Fund.

The growth of the hops benefited from prevailing favourable weather. Pests were controlled by regular sprayings effected in time, thus no damages were caused. The appearance of **Downy Mildew** and **Oidium**, noticed at the beginning of the growth, was controlled in the same way. There were less precipitations during **bloom** and **formation of the cones** than in normal years. In the district of León, especially late varieties suffered from dryness.

SPAIN

Picking started mid-August and was finished under favourable weather in mid-September. About 30 % of the crop was picked by machines. For the picking of the remaining quantity, sufficient pickers were available.

The **quality** of crop 1968 was better than the year before and was judged as follows: 89.5 % of grade I, 10.15 % of grade II and 0.35 % of grade III.

Production of hops in 1968 was as follows:

District	Acreage acres	Crop lbs.	Yield per acre lbs.
Galicia	358	195,548	546
León	1,829	2,501,890	1,368
Cantábrico	284	248,458	875
Total	2,471	2,945,896	1,192

In Galicia and Cantábrico the acreage was reduced by about 123 acres through grubbing out of the roots, but as a result of a considerably higher yield per acre, the crop turned out to be around 3,000 cwts. larger than in 1967.

Since 1950 the hop cultivation in Spain has taken a tremendous progress. This, however, was made possible through financial expenditures and technical advice from the Sociedad Anónima Española de Fomento del Lúpulo, in which nearly all breweries of the country take part as shareholders. The distribution of national hops to the brewing industry results from the height of the interest capital. Prices to farmers for the different qualities are fixed by ministerial order.

Hop Cultivation

In Spain, the varieties planted are Alsace, Hallertau and Goldings. Since years, the Fomento del Lúpulo attributes great importance to the hop research. Hybrides could be grown, which, adapting better to the climatic and geological conditions of the country, brought higher yields and better qualities. These new varieties amount already to more than half of the Spanish hop production. To assist scientific work, a research institute was established in Villanueva de Carrizo (León).

PORTUGAL

Trial hop cultivation in this country had started in 1967 after a three years study of several varieties and has reached an acreage of 123 acres until 1969. There are mostly Alsatian roots in use, which brought in trial yards a yield of 1,338 lbs. per acre. On the contrary, trials with Hallertau hops in the fourth year showed only a yield of 892 lbs. per acre and with Northern Brewer hops in the same period 1,160 lbs. per acre.

The hop cultivation is being sponsored by a brewery, situated in the Northern part of the country, which has established a special department for the technical advice of the farmers. It is intended to close contracts with these farmers. Already now the whole production is being taken over, packed and distributed to consumers. The crop 1968 of only 800 cwts. was weaker than expected and a price of \$ 55.— per cwt. was paid to farmers for first quality.

It is planned to increase the growing acreage in the following years.

FRANCE

Precipitations and temperatures in the ALSACE were distributed as follows:

	March	April	May	June	July	Aug.	Sept.
Precipitations	23.1	129.9	88.5	69.5	85.9	159.6	102.5 mm
Temperatures	7.3	11.5	13.6	17.8	18.5	17.7	15.0° C

The hops had wintered well and **spring work** could be done under favourable weather, rather early at the end of February, beginning of March. The growth was benefited through sunny and warm weather until the middle of April. This development, however, was influenced disadvantageously by a period of bad weather with excessive rainfalls and low temperatures. In June the continuing cool and wet weather led to a strong appearance of **Downy Mildew**. Immediately started control measures turned, however, out to be most difficult through the muddy soil. Only at the end of June the plants got a strong lift through favourable weather and reached the height of the trellises at that time.

The variety Striesselspalt reached **full bloom** on July 25th, Record somewhat earlier. The hops showed a weak overhang, as well as a moderate formation of laterals. A good weather period starting with August 20th favoured the **formation of the cones** and the **ripening** of the hops, could not, however, make for the desired increase of the yield.

Picking started on September 4th and was finished on September 21st. 95 % of the crop were brought in by 220 picking machines.

Quality. The Alsace hops were of yellowish-green colour, of unequal size of the cones and had a high content of lupulin. The crop was judged as follows: 85 % of grade I, 10 % of grade II and 5 % of grade III. The purchase prices for free hops were between FF 200.— and FF 300.—. The whole crop was sold on farms at the end of November.

In FLANDRES the hops came through the mild winter without frost damages. Under favourable temperatures in March, spring work could be done quickly. Cool and wet weather at the end of April and in May hampered the growth. Despite changeable weather in June the hops reached the height of the trellises at the end of this month and stood in **full bloom** by mid-July. During the growing period 24 sprayings against **Downy Mildew** and an increased attack of **aphids** had to be effected. **Verticillium Wilt** was to be noted only sporadically at the variety Replant Hallertau. The bines showed a weak overhang and as a consequence of the lasting precipitations in August the cones remained small.

Picking started in the first days of September and was finished by the end of this month. The whole crop was picked by machines.

Quality. The cones were small and uneven, mostly of palegreen colour. Blemishes were more frequent than 1967. The crop was graded as follows: 15 % of grade I, 65 % of grade II and 20 % of grade III. Prices on farms for free hops developed as follows:

		9/1	9/15	10/1	10/15	11/1
Brewers Gold	FF	220.—	220.—	250.—	250.—	300.—
Northern Brewer	FF	280.—	280.—	300.—	350.—	350.—

Whereas in **FLANDRES** and in the Belgian districts a change to the cultivation of varieties with high alpha content took place already a few years ago, in **ALSACE** and in **BURGUNDY**, however, the variety **Striesselspalt** is still mainly grown. From the total acreage in the Alsace, amounting to 2,224 acres in 1969, 2,075 acres of the hop yards are being planted with the variety **Striesselspalt**. A memorandum was submitted by the Comité National Inter-professionnel du Houblon with the suggestion to change the cultivation of varieties with governmental assistance as follows:

Variety	Acreage 1969	planned Cultivation
Record Northern Brewer } Brewers Gold } Striesselspalt }	593 acres	1,730 acres
	2,125 acres	741/988 acres
	284 acres	—
	3,002 acres	2,471/2,718 acres

It is still uncertain if these plans will be realized. Because of the present unfavourable production prices, farmers intend to grub hop yards after termination of the valid contracts.

In 1968 France imported:

Hop Imports
1968

Countries	lbs.	Countries	lbs.
Belgium-Luxembourg	253,309	b. f.	1,972,015
Germany (West)	1,345,026	Czechoslovakia	640,436
Jugoslavia	373,680	U. S. A.	58,863
c. f.	1,972,015	Total	2,671,314

French hop imports for the calendar year 1967 = 2,205,702 lbs.

Export of French hops in 1968 were as follows:

Hop Exports
1968

Countries	lbs.	Countries	lbs.
Algeria	45,194	b. f.	1,667,339
Belgium-Luxembourg	477,737	Congo (Brazzaville)	12,125
Denmark	22,046	Cambodia	10,803
Germany (West)	1,013,014	New-Caledonia	5,952
Great Britain	7,055	Austria	44,092
Iraq	27,998	Switzerland	44,753
Italy	17,637	Spanish North Africa	22,266
Cameroons	23,589	Czechoslovakia	56,217
Canada	33,069	Other Countries	441
c. f.	1,667,339	Total	1,863,988

French hop exports for the calendar year 1967 = 2,315,932 lbs.

In the district of **ALOST** no damages on the hop plants were noted with the exception of the variety **Brewers Gold**, which showed **root rot** on a rather large acreage. Cool and rainy weather at the end of April and in May hampered the growth. Careful control measures against **Downy Mildew**, **Oidium** and **aphids** had to be repeated almost every 10 days. Precipitations were distributed as follows:

BELGIUM

	March	April	May	June	July	August	Sept.
Precipitations	27.1	40.9	45.2	47.4	131.7	82.0	83.1 mm

At the beginning of July, hops had reached the height of the trellises under further unfavourable climatic conditions. Whereas the varieties **Northern Brewer** and **Brewers Gold** could benefit from this weather, the variety **Replant Hallertau** had suffered strongly and remained pointed. **Bloom** developed quickly since mid-July. On August 25th, the growing district was struck from a heavy **storm** with high winds, throwing down hop yards on an acreage of about 494 acres. The concerned farmers had to start at once with **emergency picking**. Partially, however, hops had not yet ripened enough. The stand of the hop yards was generally satisfying. As a consequence of the weather, cones remained mostly small and did not ripen on the lower third of the bines.

Picking started on September 5th under rainy weather and was finished on September 25th after a change of the weather. The whole crop was picked by machines.

Quality. The cones were of uneven size and especially weaker in colour than the past year. The crop was graded as follows: 60 % of grade I, 35 % of grade II, 5 % of grade III.

POPERINGE. After a mild winter 1967/68 with only little snowfall, the **uncovering and cutting** of the hops could be done in February and March. Sunny and warm weather until mid-April with maximal temperatures up to 30° C favoured the growth of the plants. In May this development was retarded through a continuous cold weather period. Precipitations and temperatures were distributed as follows:

	March	April	May	June	July	Aug.	Sept.
Precipitations	44.3	35.0	41.7	55.4	119.2	81.4	140.8 mm
Temperatures	5.9	8.7	10.4	14.6	15.5	17.2	14.8° C

Humid weather in June favoured at first the further growth of the hops, so that the varieties Northern Brewer and Replant Hallertau reached the height of the trellises at the beginning of July. Northern Brewers showed a vigorous overhang, whereas Replant Hallertau hops remained pointed, as this variety is sensible against cold and damp weather. Mid-July the variety Brewers Gold reached the height of the trellises and showed a strong overhang. At that time the hops stood in **full bloom**. Excessive rainfalls and high winds at the end of July and in August damaged some hop yards. The ripening of the cones was hampered too. In order to control **Downy Mildew** and **aphids** successfully, 32 sprayings had to be effected.

Picking started on September 5th, had to be interrupted because of strong rainfalls and was finished on September 21st. 145 picking machines were in action.

Quality. With the exception of the variety Replant Hallertau, the hops were judged good despite blemishes. The crop was graded as follows: 65 % of grade I, 30 % of grade II and 5 % of grade III.

Market development

Prices to farmers set in for the variety Northern Brewer with FB 3,000.— at the beginning of September, rose to FB 3,250.— until the middle of the month and reached FB 3,500.— at the beginning of October. Last quantities of this variety were traded at FB 3,750.— around mid-November. The price development for Replant Hallertau hops was similar. First quotations at the beginning of September amounted to FB 2,500.—, increased to FB 2,750.— at the middle of this month and reached FB 3,000.— at the beginning of October.

In the first days of November 1968 remaining lots were traded at FB 3,500.—. The market development of the variety Brewers Gold was similar. The Belgian crop could be sold until mid-November without any difficulties.

As the Belgian brewing industry is covering its demand in aroma hops mostly abroad, Belgian hop growers aim more and more to the cultivation of the productive varieties Northern Brewer and Brewers Gold, which find a steadily increasing market because of their high content of bitter value. The following statistic table gives a summary of this development:

	1962	1963	1964	1965	1966	1967	1968
Replant Hallertau .	55 %	41 %	32 %	30 %	25 %	17 %	14 %
Replant Saaz/Tettnng.	6 %	4 %	2 %	1 %	1 %	1 %	1 %
Northern Brewer . .	19 %	28 %	31 %	35 %	40 %	42 %	45 %
Brewers Gold . . .	15 %	24 %	32 %	33 %	33 %	40 %	40 %

Hop Imports Belgium Crop 1968

Belgium imported the following quantities of hops, crop 1968 from September 1st, 1968 until December 31st, 1968:

Country	lbs.	Country	lbs.
Germany (West)	464,068	b. f.	672,623
France	65,697	Poland	171,738
Great Britain	26,455	Czechoslovakia	743,832
Jugoslavia	116,403	U. S. A.	60,627
c. f.	672,623	Total	1,648,820

Belgian hop imports crop 1967 until December 31st, 1967: 1,826,290 lbs.

Exports of Belgian hops from September 1st, 1968, until December 31st, 1968 are shown as follows:

**Hop Exports
Crop 1968**

Country	lbs.	Country	lbs.
Australia	89,066	b. f.	1,185,634
Denmark	67,020	Norway	2,425
Germany (West)	703,267	Austria	22,046
France	126,544	Poland	33,069
Great Britain	163,802	Portugal	8,814
Italy	17,637	Switzerland	36,817
Iran	882	Sierra Leone	9,921
Ireland	12,125	U. S. A.	52,910
Malta	3,307	Trinidad and Tobago	3,307
Mauritius	1,984	Cyprus	35,494
c. f.	1,185,634	Total	1,390,437

Belgian hop exports crop 1967 until December 31st, 1967: 1,270,290 lbs.

Hops came without any frost damages through the mild winter 1967/68 and could develop well under normal weather conditions until June. On June 18th the vines reached the height of the trellises and showed a good **overhang**. Heavy rainfalls starting in July and at the beginning of August, hampered the formation of the cones and caused extreme difficulties to farmers regarding the control of **Downy Mildew** and **aphids**. An improvement of the weather since mid-August, which was characterized by sunny days and warm nights led still to a good **ripening** of the small cones, so that the crop could be regarded satisfactory in quality as well as in quantity.

ENGLAND

Only the two varieties Goldings and Bramling Cross suffered from the wet weather, which led to a considerable decrease of the yield.

In the growing districts Kent and Sussex, **Verticillium Wilt** has further spread. The infected plants were grubbed out and replaced through resistant varieties.

Picking started at the beginning of September and was finished under rainy weather by the end of September. The bringing in of the crop was especially difficult in the districts of Kent, Worcestershire and Herefordshire, where the hop yards were mostly inundated after longlasting abundant rainfalls.

The **quality** of the hops was better than anyone had expected despite of the unfriendly summer. The small cones were of pale green colour, the bittervalue, however, was somewhat higher than last year. The crop was judged as follows: 34.7 % of grade I, 45.1 % of grade II and 20.2 % of grade III. The average price to producers was fixed at £34.15.— per cwt.

Whereas the English hop growers at the end of 1968 had to be prepared for a decrease of the total admissible crop quantity in 1969, the steadily rising beer production and the therewith combined reduction of stocks brought an unexpected change.

On April 1st, 1969, the annual demand of the home brewing industry was specified with 215,000 cwts. which meant an increase of the hop requirements by 12 % as against the year before. As a consequence of the grubbing out, having taken place in 1967/68, it is not guaranteed that this demand can be covered out of own production, even after the annual quota has been raised by the Hop Marketing Board up to 105 %.

The following quantities of hops crop 1968 were imported from September 1st, 1968 to March 31st, 1969:

**Hop Imports
Crop 1968**

Country	cwts.	Country	cwts.
Belgium	3,461	b. f.	14,283
Canada	2,033	Netherlands	437
Denmark	26	Poland	487
Germany (West)	2,353	Czechoslovakia	190
Germany (East)	89	U. S. A.	200
Ireland	162	Total	15,597
Jugoslavia	6,159		
c. f.	14,283	1 cwt. = 50.8 kgs	

English Imports of hops crop 1967 until March 31st, 1968 = 16,707 cwts.

**Hop Exports
Crop 1968**

The following quantities of hops crop 1968 were exported from September 1st, 1968 to March 31st, 1969:

Country	cwts.	Country	cwts.
Belgium	602	b. f.	13,509
Germany (West)	8	Nigeria	158
Finland	12	Fiji-Isl.	14
Ireland	12,474	Other Countries	12
Malta	413	Total	13,693
c. f.	13,509	1 cwt. = 50.8 kgs	

English exports of hops crop 1967 until March 31st, 1968 = 6,934 cwts.

U. S. A.

CALIFORNIA. In the district of **Sacramento**, the hops showed no signs of damage by frost and could develop well under the usually prevailing dry weather. Precipitations were distributed as follows:

March	April	May	June	July	August	September
2.87	— .18	— .21	— .85	—	— .25	— .08 inch.

The very dry summer requested a far more stronger irrigation than usual. Hops reached the height of the trellises on June 12th and formed a very good overhang. **Bloom** set in already at the end of June, but the cones could not always develop in the lower part of the bines. Only two sprayings were necessary against **Downy Mildew** and **pests**.

Picking started on August 12th and was finished on September 6th under good weather conditions.

Quality. The hops of crop 1968 were better than 1967 in colour as well as in bittervalue. The crop was graded as follows: 85 % of grade I, 10 % of grade II and 5 % of grade III.

WEST-OREGON. During the whole growing period the hops suffered from cool and rainy weather conditions. Precipitations were distributed as follows:

March	April	May	June	July	August	September
—	1.47	3.46	1.29	— .39	4.17	2.48 inch.

The appearance of **aphids** and **Oidium** was especially favoured through the wet weather. The necessary control measures in 1968 had to be still continued during the time of the harvest. The hops reached the height of the trellises on June 25th and stood in **bloom** at the beginning of July. The development of the bines was not as good as in the past year, the cones in the lower third could not ripen in the usual way.

Picking started on August 13th and was finished on September 25th. The rainy weather during this time made the bringing in of the crop difficult.

The **quality** of the hops was judged to be generally lower than the year before and was graded as follows: 20 % of grade I, 65 % of grade II and 15 % of grade III.

EAST-OREGON and IDAHO. In this district the plants could develop well under favourable spring weather until April. Cold weather with windy days in May and in the first half of June hampered the growth temporarily. Precipitations were as follows:

March	April	May	June	July	August	September
— .62	— .15	1. —	— .36	—	2.24	— .03 inch.

A **hailstorm** on May 20th damaged about 200 acres of the growing acreage, so that the bines had to be trained once more. The late Clusters reached the height of the trellises on June 25th, and showed a good overhang, whereas early Clusters remained mostly pointed. Due to the cold weather in August, the **ripening** of the cones proceeded uneven, especially on the variety late Clusters. Four sprayings had to be effected against **Downy Mildew** on the average and between two and three times against **aphids** and **Red Spider**.

Picking set in on August 19th and was finished on September 23rd. With exception of some rainy days, the weather during the harvest was good. There was lack of labour, which had as consequence a raise of wages. Although the hops were rather equal in colour and growth, the **quality** was altogether judged weaker than the year before. The crop was graded as follows: 80 % of grade I, 18 % of grade II and 2 % of grade III.

WASHINGTON. In the district of **Yakima**, the hops had wintered without frost damages. Mostly dry weather in spring benefited the growth of the plants. Precipitations were distributed as follows:

March	April	May	June	July	August	September
— .11	—	— .47	— .02	— .02	1.71	— .32 inch.

Three sprayings were successfully effected against **Downy Mildew** and **aphids**. The hops reached the height of the trellises on June 15th and formed a vigorous overhang. Nearly uninterrupted rainfalls in August prevented a good ripening of the cones and were the cause of the **decrease of the crop result**, with regard to quantity and quality.

Because of the bad weather, **picking** started delayed on August 25th and was finished on September 20th. The **quality** of the hops was generally not as good as in 1967 and was judged as follows: 70 % of grade I, 25 % of grade II and 5 % of grade III.

As a consequence of the unfavourable climatic conditions in August, the American hop production in 1968 was 12 % below last year and resulted in one of the smallest crops since 1961. At the beginning of September, demand for advance contracts was limited. On the other side, an increased interest for free available hops was to be noted. Yakima hops obtained 42/45 c, in Oregon the variety Fuggles was traded at 60 c plus premiums. The continuing activity in October/November stiffened the market considerably and led to a further increase of the purchase prices. At this time prices in Washington, Idaho and California stood at 48/50 c plus premiums. In Oregon, Fuggles were quoted at 65 c plus premiums. At the end of the year, all growing districts were emptied by 90 % and California was sold out completely.

Market development

The rising prices for free available hops could not be without influence for future contracts. As the short supply of hops became more and more evident, price demands of the American growers for future years had gone up steadily and were at the end of May 1969 approx. 45 % higher than in September 1968. This development led to the following prices:

Washington	crop 1969/70/71/72	at 55/60/60/60	cents plus premium
Idaho	crop 1969/70/71/72	at 60/60/60/60	cents plus premium
Oregon (Clusters, Bullion)	crop 1969/70/71/72	at 50/52/55/55	cents plus premium
Oregon (Fuggles)	crop 1969/70/71/72	at 70/70/70/70	cents plus premium
California	crop 1969/70/71/72	at 55/60/65/67 1/2	cents plus premium

At the beginning of April another warehouse fire, destroying approx. 9—10,000 cwts. reflected in a complete tie up of the markets. Due to this fact growers were entirely unwilling to sell and price demands remained firm. Despite the short supply, the Hop Market Control Board had decided to reduce the saleable amount of hops for the 1969 crop by 25 %, so that only 75 % of the basic allotment could be grown. This decision resulted in the reduction of about 1,200 acres in hop acreage.

At the present time it is estimated that about 95 % of the US-hops crop 1969 are under contract.

From September 1st, 1968 until April, 30th, 1969, imports of hops were as follows:

Hop Imports Crop 1968

Country	lbs.	cwts. p. 50 kg
Belgium-Luxembourg	110,204	1,000
Canada	55,170	500
Germany (West)	6,847,276	62,118
France	533,210	4,837
Jugoslavia	1,623,662	14,730
Total	9,169,522	83,185

Import of hops crop 1967 amounted to 82.107 cwts. until April 30th, 1968.

**Hop/Extract
Exports
Crop 1968**

From September 1st, 1968 until April, 30th, 1969, exports of hops and extracts were as follows:

Country	Hops lbs.	Extract lbs.	Country	Hops lbs.	Extract lbs.
Ethiopia	22,046	—	b. f.	11,977,350	815,899
Argentina	243,942	11,384	Mozambique	45,023	—
Bahamas	4,340	—	Nicaragua	14,920	5,512
Barbados	2,923	1,145	Netherlands	332,331	118,670
Belgium-Luxembourg	114,869	38,400	Netherlands Antilles	1,984	3,132
Bolivia	80,662	—	Nigeria	126,545	—
Brazil	1,311,720	513	Norway	15,983	—
Burma	12,670	—	Austria	55,075	—
Canada	2,312,173	772	Pakistan	9,174	—
Ceylon	39,275	—	Paraguay	55,000	—
Chile	145,283	441	Peru	444,578	—
Colombia	604,898	284,537	Philippines	282,985	—
Costa Rica	15,602	—	Poland	482,620	—
Czechoslovakia	491,450	—	Portugal	80,578	—
Denmark	223,457	301	El Salvador	20,897	2,451
Germany (West)	1,457,562	—	Sierra Leone	49,059	—
Dominican Republic	58,271	—	Singapore	—	16,535
France	29,055	—	Spain	—	15,272
Greece	—	13,338	Rep. of South Africa	203,214	—
Great Britain	19,952	—	South-Korea	26,455	—
Guatemala	13,448	—	Sweden	44,183	—
Guinea	6,614	—	Switzerland	35,666	37,443
Ireland	1,339,446	—	Taiwan	372,611	—
Israel	44,030	7,414	Thailand	31,967	—
Italy	11,243	—	Togo	3,417	1,328
Jamaica	39,644	—	Trinidad	28,666	—
Japan	506,976	7,716	Uruguay	107,707	3,008
Congo-Kinshasa	48,300	—	Venezuela	217,376	11,195
Malaysia	62,273	5,512	Other Countries	16,889	12,101
Mexico	2,715,226	444,426	Total	15,082,253	1,042,546
c. f.	11,977,350	815,899	110.23 lbs. = 1 cwt. p. 50 kgs		

The American export of hops crop 1967 came to 15,943,226 lbs. until April 30th 1968.

CANADA

The cool and unfriendly weather in both growing districts **Sardis** and **Kamloops** was unfavourable for the growth of the hops. The precipitations were distributed as follows:

	March	April	May	June	July	Aug.	Sept.
Sardis	8.53	6.00	3.49	6.31	3.88	4.22	5.39 inch.
Kamloops	—,35	—,16	1.63	—,68	—,33	1.27	1.04 inch.

In the district of **SARDIS**, the vines reached the height of the trellises on June 15th and developed a good overhang. The beginning of **bloom** in mid-July and the process of the **formation of the cones** was normal. In this year, **Downy Mildew** was a serious danger and caused considerable difficulties to farmers referring to control measures. **Aphids** and **Red Spider** could be kept under control.

Picking started on August 26 th and was finished on September 28th under good weather.

Quality. The hops were good in colour and had a higher content of lupulin as against the year before. The whole crop was judged grade I.

In the district of **KAMLOOPS**, only two sprayings were effected against pests and diseases. The vines reached the height of the trellises on June 1st and stood in **bloom** at the beginning of August. The **formation of the cones** and **ripening** of the hops suffered from lack of warm weather and sunshine.

The **crop** was brought in under good weather between the 2nd and 25th of September.

Quality. The small grown cones were of green colour, but showed less bittervalue than in 1967.

On the total acreage of 954 acres (386 ha) a total crop of 1,498,000 lbs. (13.597 cwts.) was harvested. The whole crop was sold out until March 1st, 1969.

JAPAN

In the district of **NAGANO**, especially good climatic conditions until the end of May favoured the development of the hops. The dominating warm weather was interrupted by abundant rainfalls at the beginning of June, with low temperatures lasting until the end of July, so that the growth of the plants was hampered. Rainfalls and temperatures were registered as follows:

	March	April	May	June	July	August	Sept.
Precipitations	66	81	71	181	46	109	49 mm
Temperatures	3.9	10.5	14.7	19.5	23.7	24.1	19.6° C

The hops reached the height of the trellises on June 10th and showed as a result of the wet and cool weather, no vigorous overhang. **Bloom** set in at the end of the month. The sporadic appearance of **Downy Mildew** and **aphids** could be controlled by sprayings in time. On the other hand, in some parts of the growing district Botrytis was noted to a larger extent. A hailstorm caused only limited damages.

Picking started at the beginning of August during mostly sunny weather and was concluded on August 30th. There was some lack of pickers.

The **quality** of the hops was judged somewhat better than in the year before. The small grown cones had a good colour and were also richer in content of lupulin.

In the district of **HOKKAIDO** the hops came without frost damages through the relatively mild winter. **Spring work** could be done in time. The nice weather period, lasting until May, made for a quick growth of the plants. Sufficient rainfalls in July dissipated the danger of a dryness resulting from high summerly temperatures in June. Precipitations and temperatures were as follows:

	March	April	May	June	July	Aug.	Sept.
Precipitations	69	29	64	27	102	110	172 mm
Temperatures	— 0.9	6.3	11.6	17.3	20.5	19.9	15.4° C

The disease, observed in this growing district, similar to Verticillium Wilt, appeared in limited areas. **Downy Mildew** and **Red Spider** had to be controlled by up to 12 sprayings.

The hops reached the height of the trellises around mid-July and stood in full **bloom** on July 22nd. Favourable weather in August benefited the development and **ripening** of the early varieties, whereas the growth of the cones of late varieties suffered under following low temperatures.

Picking started at the end of August and was finished on September 15th under occasional interruptions by rain. The **quality** of the hops corresponded to last year's crop.

The Japanese hops of crop 1968 were graded as follows: 87.9% of grade I, 6.3% of grade II and 5.8% of grade III. 5,820 picking machines were in action, bringing in about 80—85% of the harvest.

Sponsoring breweries accepted the hops according to contracts. Prices were as follows:

Grade I	\$ 116.—	per 50 kilos	(DM 464,—)
Grade II	\$ 100.—	per 50 kilos	(DM 400,—)
Grade III	\$ 83.50	per 50 kilos	(DM 334,—)

After conclusion of the hop purchase in their own country, Japanese breweries cover their additional demand in foreign hops in accordance with the production plans for the following year.

In the districts of **RIO NEGRO** and **NEUQUEN**, situated in the lower regions of the Andes, hops could develop under mostly favourable weather. **Downy Mildew** and **aphids** were kept under control through sprayings in due time. Precipitations were distributed as follows:

1967			1968	
October	November	December	January	February
32.8	9.1	13.3	—	— mm

The bines reached the height of the trellises at the end of October/beginning of November and **Bloom** set in at the middle of January. The cones ripened on the lower part of the bines nearly in all hop yards.

Picking started in the second half of February 1968 and was finished at the end of March under favourable weather. 95% of the crop were picked by 16 machines.

The **quality** of the crop was judged good. 75% of the hops were classified of grade I and 25% of grade II. Prices paid to farmers were between argent. Pesos 700.— and 1,000.— per kilo (DM 400.—/DM 565.— per cwt.). The whole crop could be sold to home breweries.

ARGENTINE

PROVINCE OF BUENOS AIRES. The small acreage in the district of **Comandante Nicanor Otamendi** is still existing. The consequences of the dryness during the growth were only partly equalized through irrigation of the hop yards. **Downy Mildew** could be controlled in time.

Picking is done exclusively by machine. The quality of the small crop of about 220 cwts. was generally good.

Crop 1969

From the Southern Hemisphere, where the crop is harvested in February/March each year, the following information has come to hand:

REPUBLIC OF SOUTH AFRICA

Favourable climatic conditions benefited the growth of the hops. Precipitations were distributed as follows:

1968					1969		
Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Febr.	March
2.55	2.10	2.10	5.78	0.94	1.21	1.27	3.85 inch.

The plants reached the height of the trellises by the end of December and stood in **bloom** at the beginning of January 1969. The bines developed a different overhang, but the cones ripened well on the lower third of the bines. Only one spraying was necessary against pests and diseases.

Picking started on February 11th and was finished on March 21st. 30 % of the crop were picked by one machine. There were not always enough pickers available.

The hops of crop 1969 were judged good in **quality** as well as in colour and classified as follows: 47 % of grade I, 35 % of grade II and 18 % of grade III. On a somewhat smaller acreage of 307 acres a crop of 179,650 lbs. (585 lbs. per acre) was harvested. Prices amounted to 55 c per lb. (DM 336.— per cwt.).

NEW ZEALAND

Under cooler weather in October/November 1969 plants could develop only slowly. From December 1968 until February 1969, an excellent weather period favoured the further growth of the hops and contributed to a quantitative good crop. Rainfalls during the season 1968/69 were distributed as follows:

1968					1969		
Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Febr.	March
6.20	4.09	5.50	1.62	5.65	4.60	2.83	— .77 inch.

The hops reached the height of the trellises in mid-January and showed a vigorous overhang. **Bloom** developed in the middle of the month, somewhat later than usual. Favoured through the weather, cones could ripen well on the whole length of the bines.

Picking started at the beginning of March and was finished within 3 weeks under good weather conditions. There was no lack of labour.

Quality. The hops were of even growth, good in colour and the content of lupulin was above average. The crop was graded as follows: 1.7 % of grade I, 42 % of grade II, 53.2 % of grade III and 3.1 % of grade IV.

On an acreage of 610 acres a crop of 809,309 lbs. was harvested (1,327 lbs. per acre).

The price paid to farmers was between 47 c and 59 c per lb. (DM 232.— to DM 291.— per 50 kilos). For hops of grade I and the variety "Smoothcone" a premium of 2 c per lb. (DM 10.— per 50 kilos net) was paid.

ARGENTINE

According to informations on hand, the hop production 1968/69 suffered from a heavy set back. Although there are still no details available, the final crop result is supposed to be 30 % lower than 1968.

The reason for this is mainly a hot and dry summer as well as high winds, drying out the soil. The irrigation of the hop yards was not sufficient. Later starting rainfalls could not make up the loss.

The district of the **PROVINCE BUENOS AIRES** seems to be especially strongly affected, as the yield there is considered to be unusually low.

Downy Mildew, aphids and Red Spider appeared of course, but could be successfully controlled.

The **quality** of the crop was classified as follows: 25 % of grade I, 60 % of grade II and 15 % of grade III. The price paid to farmers exclusive packing, amounted to Pesos 1,100.— per kilo (DM 625.— per cwt.).

GERMANY. The favourable weather during the past two weeks benefited the growth of the plants. In all districts, the hops reached the height of the trellises with partly overhang and show a rich development of laterals. In the **Hallertau**, burr has already started. During the next few days, the beginning of bloom is expected. The yards show a healthy aspect. The appearance of Downy Mildew as well as aphids had to be carefully controlled.

Growth 1969

CZECHOSLOVAKIA. Because of the delayed cultivation owing to a cool spring, growth of the hops was retarded by about 2—3 weeks. Favourable weather in the future is desired, so that the plants can reach the full height of the trellises and do not remain pointed, as a consequence of early bloom.

JUGOSLAVIA. The plants reached the height of the trellises and are in bloom since the beginning of July. Because of dryness, the vines remained pointed and developed only short laterals. In the Backa a thunderstorm on July 8th, 1969 destroyed about 20 % of the growing acreage. The height of the crop loss cannot be foreseen yet.

FRANCE-ALSACE. Normal growth, despite changeable moderate warm weather. Development of laterals relatively good. Whereas Downy Mildew appears only sporadically, the Aphis fly is still present.

BELGIUM. The delay of the growth was almost offset by favourable weather. Replant Hallertau and Northern Brewer hops reached the height of the trellises.

U. S. A. Apart from a few exceptions, the growth is satisfactory. Early burr will decrease the Fuggle crop. In Yakima some newly or replanted hop yards are still retarded, so that a normal yield of these yards can hardly be expected.

JOH. BARTH & SOHN

The compilation of this report has been made possible in many instances by data supplied from observers in many countries, which is hereby gratefully acknowledged.

Seven Generations Hop Trade by the Family Barth

1794

Johannes Barth (1st generation) sets up a hop business under his own name together with his son Georg in Betzenstein (Franconia).

1827

Georg Barth (2nd generation) makes a "profit of 1,820 florins with a turnover of 13,653 florins, 11,855 florins costs and 22 florins dubious claims".

About 1840

Transfer of location to Lauf near Nürnberg and establishment of a new firm under "Gebrüder Barth". The brothers Johann, Johann-Georg and Michael Barth (3rd generation) expand business relations in Germany and Europe.

1863

Separation of the firm "Gebrüder Barth" between Johann-Georg and Michael on one side and Johann Barth on the other. The latter sets up the firm JOH. BARTH & SOHN, NÜRNBERG, together with his son Wilhelm (4th generation).

1868

First oversea hop export to New York.

1872

At the age of 23 years Johannes Barth takes over the management of the enterprise after the death of father and brother in the same year and moves to the Brunnengasse 13 in Nürnberg.

1877

Publication in "Allgemeine Hopfen-Zeitung" about the speciality of hop preservation according his own method.

1907

Entering in business of the 5th generation, the brothers Richard, Walter and Heinrich Theodor Barth.

1920/26

Establishment of branches in Saaz, Prag and Strassburg. The 6th generation enters the firm with Johannes Barth.

1932

Establishment of John Barth Inc., New York. The hop farm Barthhof is acquired by Heinrich Theodor Barth.

1937

The family Harald Goering takes over the Franconian hop farm Mühlreisig near Spalt, built in the 18th century.

1939

Highest pre-war turnover of 40,000 cwts. The firm disposes of 8 packing halls.

1948

Beginning of after-war activities.

1953/54

Construction of the office and packing facilities in the Glockenhofstrasse 24/26.

1956

Setting up of the affiliated company Franco-Suisse de Houblon SA. in France.

1957

Introduction of forward contracts in Germany. Sales reach the pre-war turnover.

1959

For the first time the Northern Brewer variety, rich in bittering value, is cultivated at the Barthhof.

1961

Foundation of Aktiengesellschaft Joh. Barth & Sohn, Basel, and re-opening of John Barth Inc., New York. The 7th generation of the Barth family enters the firm.

1962

Messrs. HOPCON-Joh. Barth & Sohn G. m. b. H. start the production of hop extract in the plant Wolnzach/Hallertau.

1965

Participation with HOPCON INC., New York. Beginning of the production of extract in Wapato/Wash. (USA).

1966

Messrs. Joh. Barth & Sohn Ges. m. b. H. is founded in Vienna/Austria.

1967/68

Beginning of the production of concentrated hop powder HOPAROM. Participation with Messrs. Hopfenveredlung Dr. A. Müller & Co., Coburg.

1969

Celebration of the 175th anniversary.

Partners of Messrs. JOH. BARTH & SOHN, Nuremberg

Heinrich Joh. Barth
Harald Goering-Barth
Peter Barth
Michael Barth
Harald Goering Jr.