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Hop Report 1956/57

Economical Situation

The simultaneous events in Hungary and around the Suez Canal evidenced the instability of the political situation. Visible consequences on the world market, however, were less severe than anticipated.

The trend towards higher wages and consequently the development of higher cost of living, continued the world over. Subsequent inflationary tendencies showed up in different degrees in all countries. On March 25th, 1957, an agreement has been signed in Rome by the Benelux-States, France, Italy and Western Germany with the aim of creating a common market.

Constant favourable balances of trade in Western Germany increasingly hamper commercial connections abroad. The rate of discount, which had been increased by 1% on May 19th, 1956, has been lowered again to the old rate of 4½% by two decreases of ½% each on September 6th, 1956, and January 11th, 1957.

Production of Beer

An **Increased Production** of beer during 1956 as compared with 1955 is shown in the following countries: Argentine 5.7%, Australia 3.8%, Austria 5.8%, Canada 2.7%, Chile 1.1%, France 4.4%, Germany (West) 9%, Ireland 4.7%, Japan 13.3%, Mexico 14%, Netherlands 8%, Norway 1.4%, Philippine Islands 9.6%, Saar 9%, Switzerland 4.2%.

A **Lower Production** in 1956 as against 1955 is to be noted in: Belgium 0.6%, Finland 7.1%, Italy 0.4%, Luxembourg 2.4%, South African Union 3%, Uruguay 3.1%, Venezuela 5.4%.

1 ha = 2.934 bayr. Tagwerk — 1 bayr. Tagwerk = 0.341 ha
1 ha = 2.471 acres — 1 acre = 0.405 ha

1 Liter = 0.2642 gall. (USA.) — 1 gall. (USA.) = 3.7853 Liter
1 Liter = 0.2201 gall. (Brit.) — 1 gall. (Brit.) = 4.5435 Liter

1 hl = 100 Liter = 26.42 gall. = 0.8523 bbl. (USA.) — 1 bbl. (USA.) = 31 gall. = 1.1734 hl
1 hl = 100 Liter = 22 01 gall. = 0.6114 bbl. (Brit.) — 1 bbl. (Brit.) = 36 gall. = 1.6356 hl

1 kg = 2.20462 lbs. — 1 lb. = 0.45359 kg
1 shortton (sht) = 2000 lbs. = 907.185 kg
1 longton (lgt) = 2240 lbs. = 1016.048 kg

1 metr. Tonne = 20 Ztr. = 1000 kg = 1.10231 shorttons = 0.98419 longtons

1 Ztr. = 50 kg = 110.23 lbs. = 0.984 cwt. (Brit.) — 1 cwt. (Brit.) = 112 lbs. = 50.8 kg = 1.016 Ztr.
1 Ztr. = 50 kg = 110.23 lbs. = 1.102 cwt. (USA.) — 1 cwt. (USA.) = 100 lbs. = 45.36 kg = 0.9072 Ztr.

1 quarter (qr) = 400 lbs. = 181.44 kg (barley) — 1 Ztr. = 0.27555 qr.
1 bushel (bu) = 48 lbs. = 21.77 kg (barley, malt) — 1 Ztr. = 2.2965 bu.
1 bushel (bu) = 56 lbs. = 25.4 kg (corn, milocorn) — 1 Ztr. = 1.9685 bu.

DM 1.– = US $ –.23809 / DM 4.20 = US $ 1.– / US $ 2.80 = DM 11.76 = £ 1.–.–

1 mm precipitations = 1 Ltr. of water per m², 1 mm = 0.04", 1" = 25 mm.

Production of Beer 1956

Country	1000 bbl. of 31 gall. each		Country	1000 bbl. of 31 gall. each	
Germany			b. f.	125,019	154,410
West 32,684			Paraguay	39	
East 11,932	44,615		Trinidad	27	
England	33,904		Martinique	13	
USSR.*)	15,708		**America**		125,098
France	11,134		Belgian Congo	1,087	
Belgium	11,123		Union of South Africa	682	
Czechoslovakia	8,523		Algiers	597	
Poland	4,220		Morocco	306	
Austria	3,919		British East Africa	288	
Denmark	3,013		French West Africa	170	
Ireland	2,793		Tunis	102	
Switzerland	2,284		Egypt	85	
Netherlands	2,195		Nigeria	85	
Sweden*)	1,684		Cameroons	68	
Spain	1,557		Moçambique	43	
Italy	1,429		Angola *)	39	
Roumania	1,253		Ghana	38	
Hungary	1,172		Ivory Coast *)	37	
Finland	901		South West Africa	36	
Saar	846		Ethiopia	18	
Norway	671		French Equ. Africa	18	
Jugoslavia	656		Madagascar	4	
Luxembourg	312		**Africa**		3,703
Greece	280		Japan	3,937	
Portugal	177		Vietnam	511	
Malta	28		Philippine Islands	489	
Iceland	12		Singapore	325	
Europe		154,410	Indonesia	250	
U.S.A.	90,376		Turkey	230	
Canada	8,836		Formosa	65	
Brazil	6,648		Hongkong	57	
Mexico	6,400		Thailand	49	
Columbia	3,821		Ceylon	36	
Argentine*)	3,154		Iran	34	
Venezuela	1,184		India	27	
Chile	1,121		Lebanon	26	
Cuba	1,027		Iraq	22	
Peru	842		Pakistan *)	16	
Uruguay	537		Syria	2	
Ecuador	290		**Asia**		6,076
Bolivia	231		Australia	8,926	
Panama	139		New Zealand	1,743	
El Salvador	111		**Australia**		10,669
Honduras	85		Total		299,956
Dominican Republic	71				
Jamaica	56				
Costa Rica	51				
Nicaragua	39				
c. f.	125,019	154,410	*) estimate		

Beer Output in Western Germany

Output of beer in Western Germany during the calendar year 1956 amounted to . . . . . 31,604,251 bbls.
Production of beer in the Western sector of Berlin for the same period was 1,079,548 „
Total 32,683,799 bbls.

These figures include 171,040 bbls. delivered tax free to the occupation forces (1955 = 270,328 bbls.) as well as exports and other sales against foreign currency totalling 747,192 bbls. (1955 = 610,675 bbls).

Crop 1955 (Supplement)

Complete figures of imports and exports of hops crop 1955 during the period from September 1st, 1955, to August 31st, 1956, can now be stated as follows:

	Import	Export
Germany	505,074 lbs.	12,176,006 lbs.
Belgium	3,065,276 „	642,420 „
England	547,843 „	5,292,032 „
U.S.A.	3,396,186 „	10,163,647 „

There were practically no free available stocks of hops in Germany on September 1st, 1956. With the exception of abt. 3000 cwts. of Hallertau hops crop 1954 still in hands of the cooperatives and which finally found an outlet during the season 1956/57 the demand could be covered only by hops of the new crop 1956.

Crop 1956

Growth of the Hop Crop 1956 in Germany

The weather during 1956 was not favourable for the growth of the hops. The winter 1955/56 was mild. At the end of January 1956 a severe **Cold Wave** set in together with considerable **Snowfall**. The earth was deeply frozen and could not absorb sufficient moisture during the thaw in March 1956. **Spring Work** began later than normal everywhere and was hampered by adverse weather. The shoots of the hops could show a good development only during more favourable weather at the beginning of May. The generally wet and cold weather in 1956 resulted in the hop plants generally showing a pointed stand. A certain offset against the missing overhang, however, resulted from the uniformly plentiful set of cones from the top of the vines right down to the bottom laterals.

Downy Mildew found good conditions during the wet year of 1956, but could be controlled in the usual way. Combined sprayings were generally used in order to control **Red Spider** and **Aphids**, as far as these pests appeared. No danger resulted from pests and diseases, whereas **Verticillium Wilt**, which has appeared in the Hallertau, claims apprehensive attention.

Hails did local damages. Losses by **Storm** in 1956 were greater than normal. The **Harvest** was delayed by lack of pickers and sometimes unfavourable weather conditions. In spite of all adverse circumstances a bigger crop than in 1955 could be harvested. As a result of the wet growth, the colour of the hops crop 1956 was often somewhat less brilliant than in former years.

Weather data from the Experimental Hop Farm Hüll/Hallertau

1956	March	April	May	June	July	August	Sept.
Precipitations per month (mm)	75	48	52	137	160	134	40
Monthly average of air temperature °Celsius	2.6	5.5	11.6	13.2	16.6	14.6	13.1
Maxima of air temperature °Celsius	18.6	19.6	28.5	26.8	28.–	28.9	25.6
Minima of air temperature °Celsius	—17.4	—8.1	—2.4	+2.1	+6.8	+2.1	+0.1
Monthly average of relative air humidity %	76	80	75	80	80	82	83
Other data:							
Snowfall	7 days	8 days	–	–	–	–	–
Snowcover	8 „	6 „	–	–	–	–	–
Hoarfrost	12 „	7 „	5 days	–	–	–	1 day
Storm	–	–	1 day	2 days	–	–	–
Thunderstorm	–	–	6 days	6 „	10 days	1 day	2 days

Hallertau. Considerable **Snowfall** and **Cold Weather** in mid-March as well as waterlogged gardens delayed **Spring Work**, which started about a fortnight later than normal at the end of March and was finished about the end of April 1956.

Climatic conditions in May were not favourable for the vegetation. **May-bugs** appeared locally. The hops had reached about half of the height of the trellises by the end of May/beginning of June under more favourable weather and in that way offset in part the lost development during the springtime. In June, however, temperatures were under average generally which hampered growth. About three quarters of the heigth of the trellises was reached by the end of June and development of **Laterals** was quite satisfactory. **Aphids** appeared strongly in some parts.

Acreage, Yield and Production 1955 and 1956

	Acreage 1955 Acres	Yield Pounds per acre	Production 1955 Pounds	Acreage 1956 Acres	Yield Pounds per acre	Production 1956 Pounds
Hallertau	12,767	1,525	19,469,815	12,906	1,770	22,844,616
Spalt	2,187	1,364	2,982,273	2,177	1,355	2,950,747
Hersbruck	1,505	1,181	1,777,128	1,470	1,162	1,707,683
Jura	319	1,489	475,091	316	1,382	436,841
Bavaria	16,778	1,472	24,704,307	16,869	1,656	27,939,887
Tettnang	1,710	1,661	2,840,296	1,700	1,370	2,328,609
R.H.W.	544	1,071	582,566	509	897	456,793
Baden	84	1,325	111,332	72	1,485	106,923
Rheinpfalz	71	1,573	111,663	69	1,441	99,428
Germany	**19,187**	**1,478**	**28,350,164**	**19,219**	**1,609**	**30,931,640****)**
Saaz (Zatec)			10,019,907	16,719	460	7,684,023
Auscha (Ustek)			1,158,848	1,129	543	613,650
Raudnitz (Roudnice)			1,392,976	2,426	458	1,111,119
Other Districts			578,708	722	311	224,869
Czechoslovakia	**21,251**	**619**	**13,150,439**	**20,996**	**459**	**9,633,661**
Alsace	2,471	1,402	3,463,427	2,471	981	2,425,060
Dep. Côte d'Or	420	892	374,782	420	630	264,552
Northern France	556	1,289	716,495	556	833	462,966
Lorraine	62	960	59,524	62	676	41,887
France	**3,509**	**1,315**	**4,614,228**	**3,509**	**910**	**3,194,465**
Alost	568	1,562	887,351	593	1,301	771 610
Poperinghe	1,161	1,517	1,761,475	1,211	819	992,070
Vodelée	25	1,146	28,660	34	908	30,864
Belgium	**1,754**	**1,526**	**2,677,486**	**1,838**	**976**	**1,794,544**
Slovenia	4,151	968	4,020,420	4,448	1,061	4,719,497
Backa	875	416	363,760	926	428	396,828
Jugoslavia	**5,026**	**872**	**4,384,180**	**5,374**	**952**	**5,116,325**
Austria	69	863	59,524	91	1,114	101,412
Galicia	314	928	291,448	314	849	266,756
León	415	721	299,054	415	785	325,840
Asturias	79	529	41,777	79	571	45,084
Vasco-Navarra	27	367	9,921	27	474	12,787
Spain	**835**	**769**	**642,200**	**835**	**779**	**650,467**
Sweden	15	808	12,125	15	808	12,125 *)
Switzerland	17	1,543	26,235	17	1,556	26,455
Poland	4,280	658	2,815,274	4.564	309	1,410,944 *)
USSR.	7,413	1,191	8,827,218	21,003	308	6,464.989
Continent	**63,356**	**1,035**	**65,559,073**	**77,461**	**766**	**59,337,027**
Kent	11,425	1,478	16,881,945	11,063	977	10,807,941
Hants	585	1,452	849,543	560	1.037	580,912
Surrey	110	1,435	157,849	115	1,043	119,930
Sussex	1,927	1,404	2,705,265	1,851	979	1,812,512
Hereford	4,402	1,292	5,687,978	4,389	1,139	4,999,151
Worcester	1,956	1,227	2,400,808	1,963	1,147	2,251,337
Other Counties	52	1,489	78,925	51	1,061	54,123
England	**20,457**	**1,406**	**28,762,313**	**19,992**	**1,032**	**20,625,906**
Europe	**83,813**	**1,125**	**94,321,386**	**97,453**	**821**	**79,962,933**
Washington	13,000	1,600	20,800,181	13,300	1,720	22,876,000
Oregon	3,900	1,180	4,601,882	3,800	1,260	4,788,000
California	5,200	1,560	8,112,046	5,300	1,350	7,155,000
Idaho	1,597	2,104	3,360,031	1,800	1,980	3,564,000
U.S.A.	**23,697**	**1,556**	**36,874,140**	**24,200**	**1,586**	**38,383,000**
Quebec	12	46	551			
Ontario	5	287	1,433			
Brit. Columbia	1,008	1,393	1,404,000			
Canada	**1,025**	**1,372**	**1,405,984**	**933**	**1,562**	**1,457,000**
Tasmania	1,349	2,211	2,983,044	1,423	2,231	3,174,624
Victoria	420	1,786	750,005	309	2,230	689,158
Australia	**1,769**	**2,110**	**3,733,049**	**1,732**	**2,231**	**3,863,782**
New Zealand	749	1,437	1,076,286	744	1,666	1,239,190
Nagano	630	1,263	795,860			
Hokkaido	72	796	57,320			
Yamagata, Fukushima, Yamanashi	642	1,304	836,866			
Japan	**1,344**	**1,257**	**1,690,046**	**1,357**	**1,126**	**1,527,418**
Manchuria	247	680	167,990*)	247	402	99,207 *)
Argentine	316	467	147,708	316	467	147,708
South-Africa	254	1,349	342,595	197	1,069	210,634
Total	**113,214**	**1,234**	**139,759,184**	**127,179**	**998**	**126,890,932**

*) estimate **) Official Weighings on April 23rd, 1957

Welcome dry and warm weather was lacking until the beginning of July. The vines had generally reached the height of the trellises but showed a pointed stand. First **Burrs** were noted during the first week of July. The hops reached full **Bloom** in the second half of July and the **Formation of the Cones** started by the end of that month. This, however, was hampered by rather cool weather in August. **Storms** caused local damages. The formation of the cones developed better later on under warm weather until harvest, which began on August 25th/27th. Hop yards had not shown a big overhang, but vines were covered with cones from top to bottom. Secondary growth was often noted. **Picking** was finished only about September 20th, as occasionally unfavourable weather as well as lack of pickers delayed work.

Quality. The Hallertau hops crop 1956 showed cones of normal size. The colour was not so uniformly green as usual as a result of the wet growth. **Wind Whipping** was more frequent than customary. The lupulin was of bright colour and good aroma but not quite as plentiful as the year before.

Spalt. **Uncovering** and **Cutting** began later than usual during the second week of April and was hampered by rain and **Snowfalls.** Vegetative development of the hop plants in May 1956 was slower than normal. **Fleas** appeared especially in yards on heavy locations. Growth could benefit from more favourable weather by the end of May/beginning of June and the loss of development during springtime was mostly offset. The yards generally showed a healthy aspect. There were more rains than desirable during the month of June and the growth of the hops showed the effects of cooler weather. The height of the trellises was generally reached by the beginning of July and locally there appeared overhang. Warmer weather in July was favourable for the development.

Hop gardens were in full **Bloom** at the beginning of August. The vines showed a rich set and the **Formation of the Cones** started in early locations. Warm and sunshiny weather favoured the ripening of the hops. **Picking** began sporadically on August 27th, was general on August 30th and finished under not always favourable weather conditions on September 20th. To alleviate the prevailing lack of labour, some units of the new German *Bundeswehr* served as hop pickers.

Quality. Spalt hops crop 1956 were not so uniformly green and brilliant as in other years. **Wind Whipping** was to be noted. Cones were of normal growth with fine and light coloured lupulin of very good aroma. The hops, however, were often found to be insufficiently dried on delivery from farmers.

Tettnang. The weather in early 1956 retarded spring work and the development of the plants. In this climatically favoured district as well it was too cool for the young shoots even in May 1956 and late cut gardens were retarded in growth. Pests and diseases were under control. The weather turned warmer by the end of May/beginning of June and the plants reached half the height of the trellises. Wet and cold weather until the end of June was not favourable for the vegetative development.

The vines had generally reached the height of the trellises at the beginning of July. This month brought unstable weather with sometimes much **Rain.** The general aspect of the hop yards showed pointed vines with little overhang. The development of **Laterals,** however, was satisfactory. **Bloom** benefited from warmer weather during the second half of July.

The **Formation of the Cones** started in early uncovered gardens at the beginning of August, whereas late uncovered gardens were in full **Bloom.** The missing overhang was offset by a rich set on the vines down to the undermost laterals. Premature **Picking** started sporadically on August 20th but the harvest became general only during the last week of August and was finished under sometimes unfavourable weather.

Quality. As a result of the protracted harvest, Tettnang hops were riper than in other years and for this reason differed more than usual in colour. The cones had a uniform growth with light coloured and healthy lupulin, which showed relatively high bitter values.

Wurttemberg. Spring work was done considerably later than in normal years. The cold weather in April with **Snow** and **Nightfrosts** retarded growth. This was offset in part by good weather until the end of May/beginning of June. On the average, the plants had reached half the height of the trellises. **Hails** caused local damages. The weather in June remained not so favourable so that the vegetative development of the hops did not advance sufficiently but conditions took a turn for the better by the end of July. The height of the trellises was reached and some overhang was to be seen. **Bloom** began in early uncovered gardens under unstable weather. Hop yards generally showed a pointed stand. Early varieties were in full **Bloom** during the second half of July and showed a rich set, whereas late hops were in **Burrs.** Generally the stand of the crop was judged weaker than the year before.

Favourable weather during the first half of August benefited the **Development of the Cones** on early varieties, which in late gardens started by the middle of August. **Picking** began during the first days of September 1956.

Quality. Wurttemberg hops crop 1956 did not show the uniformly green colour as in 1955 and were less heavy in growth. Cones were somewhat smaller in size. Drying and clean picking were satisfactory.

Hersbrucker Gebirge. **Uncovering** and **Cutting** started by the end of March and was repeatedly interrupted by **Cold Weather, Rain** and **Snowfalls** in April. Warmer weather in May favoured the start of the young shoots, but generally that month was too dry. **May-bugs** appeared locally. Warm weather by the end of May/beginning of June benefited growth; the vines reached half the height of the trellises. The weather was generally cool and rainy in June 1956. The stand of the gardens, however, was satisfactory on the average. The height of the trellises was reached in some parts. The month of July brought continued cool weather with considerable **Precipitations.** Early varieties started to bloom by the middle of July. Early gardens showed generally good development, whereas late varieties were not quite satisfactory. At the beginning of August, early varieties were in full **Bloom** and the **Formation of the Cones** began, whereas bloom started on late varieties.

During August 1956, which set in with rains, good although somewhat cool summer weather prevailed so that the formation of the cones went on somewhat more slowly than normal. **Picking** of early varieties began sporadically by the end of August. The results of the harvest were not as good as expected. The cool weather had not only retarded harvest, but as a result cones often showed some signs of underdevelopment.

Quality. The size of the cones of Hersbruck hops was not uniform especially as regards early varieties. The colour was not so green as the year before. Lupulin was healthy and of good colour. Drying and picking occasionally left something to be desired.

Crop Estimate 1956

The annual inspection of the districts of production during the last days of August 1956 resulted in the following crop estimates:

	Yield estimated lbs.	Yield harvested lbs.
Hallertau	24,250,000	22,844,616
Spalt	3,310,000	2,950,747
Tettnang	2,870,000	2,328,609
Hersbruck	2,310,000	1,707,683
Wurttemberg	550,000	456,793
Jura	550,000	436,841
Baden	110,000	106,923
Rheinpfalz	110,000	99,428
Total	34,060,000	30,931,640

The reason for over-estimating the crop may be found in the effects of the weather prevailing in 1956 and which was not favourable for a good ripening of the hops. Cones were of less weight than anticipated and in addition certain quantities remained unpicked under difficult harvest conditions.

Bitter Values of Crop 1956

Origin	Total resin content anhydric	Soft resins	%	Humulon	%	Lupulon + Fractions of soft resin	%	Hard resins	%	Bitter value Wöllmer
Hallertau	16.9	14.7	86.98	6.0	35.50	8.7	51.48	2.2	13.02	7.0
Hallertau/Au	17.1	14.7	85.96	6.0	35.09	8.7	50.87	2.4	14.04	7.0
Hallertau/Mainburg	16.9	14.7	86.98	5.9	34.91	8.8	52.07	2.2	13.02	6.9
Hallertau/Wolnzach	16.8	14.5	86.31	5.4	32.14	9.1	54.17	2.3	13.69	6.4
Spalt	17.4	15.1	86.78	6.0	34.48	9.1	52.30	2.3	13.22	7.0
Tettnang	17.6	15.2	86.36	6.3	35.80	8.9	50.56	2.4	13.64	7.3
Hersbruck	17.0	15.0	88.23	5.9	34.70	9.1	53.53	2.0	11.77	6.9
Jura	16.9	15.0	88.75	6.1	36.09	8.9	52.66	1.9	11.25	7.1
Rheinpfalz	15.4	13.2	85.71	5.9	38.31	7.3	47.40	2.2	14.29	6.7
Baden	16.6	14.0	84.33	5.9	35.54	8.1	48.79	2.6	15.67	6.8
Wurttemberg	16.8	15.1	89.88	5.9	35.12	9.2	54.76	1.7	10.12	6.9
D.D.R.	12.3	10.3	83.74	3.1	35.20	7.2	58.54	2.0	16.26	3.9
Alsace	18.4	16.2	88.04	7.4	40.22	8.8	47.82	2.2	11.96	8.4
France (Nord)	16.1	13.4	83.23	4.9	30.43	8.5	52.80	2.7	16.77	5.8
Saaz	14.1	12.4	87.94	4.5	31.91	7.9	56.03	1.7	12.06	5.4
Jugoslavia	16.4	14.8	90.24	7.7	46.95	7.1	43.29	1.6	9.76	8.5
U.S. Seedless	18.4	16.2	88.04	8.2	44.56	8.0	43.48	2.2	11.96	9.1
Japan/Fukushima	19.3	16.7	86.53	5.6	29.02	11.1	57.51	2.6	13.47	6.8
Japan/Yamagata	20.4	18.8	92.15	7.5	36.76	11.3	55.39	1.6	7.85	8.7

The crop of 1956 shows lower bitter values than the hops of 1955. This decrease is a result of the cool and rainy weather during the most important time of hop growth. Lack of sunshine resulted in a slighter development most especially of soft resins.

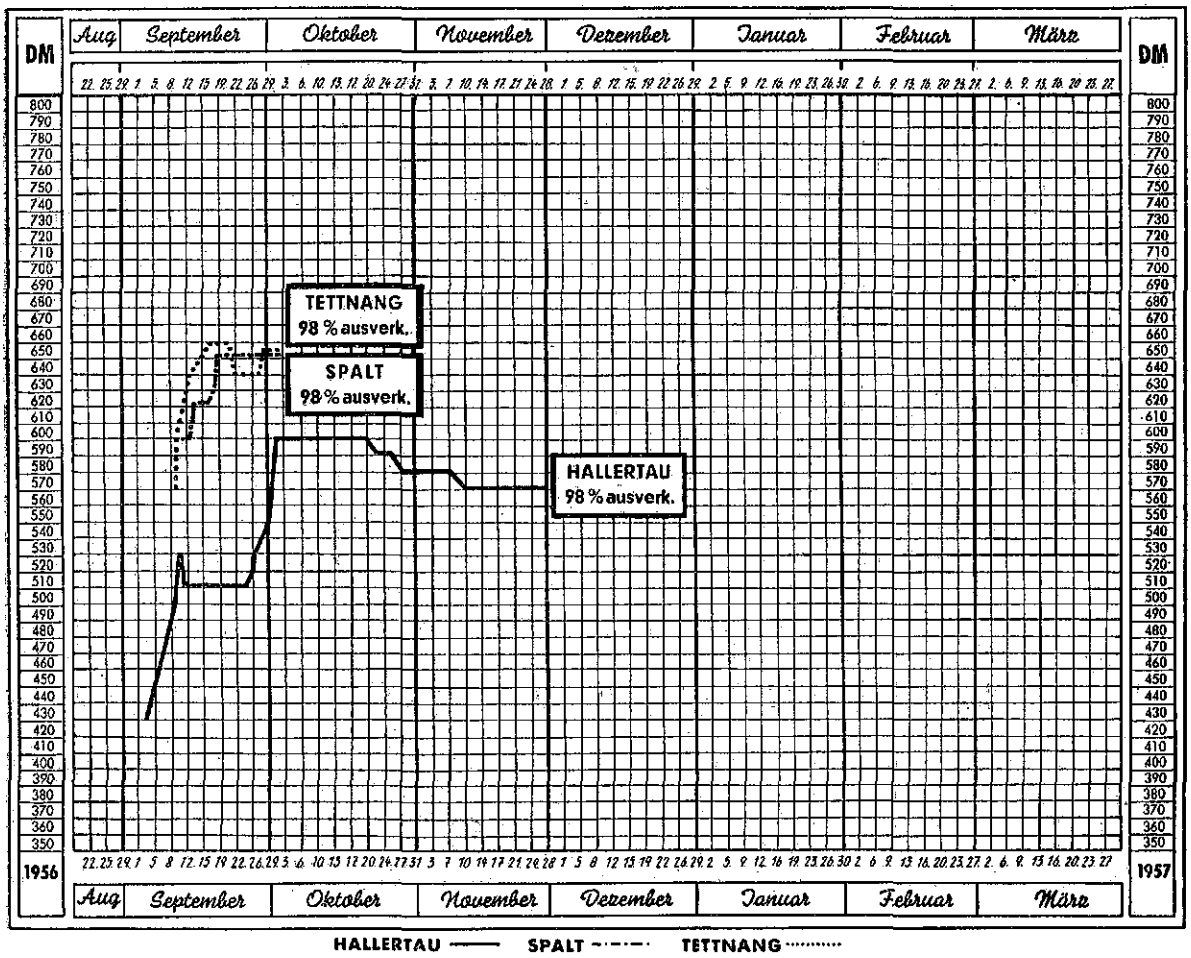
Hop Purchase Crop 1956 in Germany

Although crop prospects 1956 in Germany were higher than the year before, the market developed in an extraordinarily stormy way. Prices started abt. DM 200.— over and above the initial quotations of the season 1955. Spalt and Tettnang hops attained the exceptional price advantage of DM 150.— as against Hallertau hops. Breweries purchasing directly on farms increased the bids and considerable quantities taken over by the cooperative in Spalt reduced the supply in an already narrow market.

On the other hand, quotations for the generally more reasonably priced hops from Hersbruck, Wurttemberg, etc., had risen nearly to the level of Hallertau hops in consequence of limited crop results. Purchases therefore were directed most especially on the Hallertau and trading developed in such a way that authorities in that district had to discontinue the acceptance of hops for inspection, as the quantities could not be handled any longer. The Hallertau was sold out to abt. 90% within four weeks. The other districts of production were sold out already sooner.

Earlier than usual, the customary calm in purchasing set in by the beginning of October, during which time prices settled on the prevailing level. Trade was constantly quiet and by the end of October quotations for hops still available on farms began to crumble so that final lots changed hands at somewhat lower prices.

Development of Quotations Crop 1956



Tettnang. Small lots were traded during the first days of September at DM 570.—/580.—. An important purchase by a brewery at DM 600.— established a new level. Trading started on September 8th on this basis. Demand was active and farmers were not able to supply sufficient quantities as picking went on rather slowly. The general tendency was firm and prices reached DM 650.— on September 15th. This level was maintained until the end of September and practically all hops were sold on this basis. Final lots of advanced quality changed hands on the basis of DM 620.—/640.—, as demand slackened.

Spalt. Events in Tettnang as well as knowledge of considerable quantities taken out of the market by the cooperative caused purchases to start abruptly on September 11th on a general basis of DM 600.—. Prices rose to DM 620.— within two days whereas breweries purchasing directly on farms paid DM 30.— more. Under active trading, prices advanced to DM 650.— until September 18th. The Spalt district was sold out on this level. 90% of the Spalt crop had changed into second hands within two weeks only.

Hallertau. Farmers were reluctant sellers at DM 430.—/440.—, while picking was still in progress. Even as quotations rose continually, no important sales were effected until September 9th, when the level of DM 500.— was reached. Prices settled on this basis after some oscillations and voluminous purchases were effected, which led to an overcrowding of the Hallertau official warehouses. Trading had advanced so rapidly that hops became scarce by the end of September and additional purchasing efforts started another upswing of prices, which pushed quotations by leaps and bounds up to DM 600.— on October 1st. This development subsided somewhat as activity slowed down and became retrograde in October/November. Only 10% of the Hallertau crop was handled during that period.

Hersbruck. First purchases of single bales began on September 6th at DM 420.—. Following the general trend of the market, prices passed DM 450.— by the middle of September and reached DM 500.— on September 26th. This district profited from higher prices as the harvest there is later than elsewhere. As a consequence of insufficient drying and high humidity of Hersbruck hops, this provenience had almost equal price with Hallertau hops. DM 540.— was paid during the first half of October and the district was sold out on this basis.

Wurttemberg. Trading developed only after September 20th. Small lots were purchased on the basis of DM 450.— at the beginning, but prices rose to DM 500.— within five days and up to DM 520.—/530.— by the end of September. The district was sold out at that time, as many lots were taken over by the cooperative. Last lots were sold as high as DM 580.—.

Hop Cooperatives

The following details are known up to now regarding the activity of the cooperatives during the hop season 1956/57:

Cooperative	Quantities handled Crop 1956	Grading and Payments							
		Choicest		Grade I		Grade II		Grade III	
		%	DM	%	DM	%	DM	%	DM
Hallertau *)	1,050,000 lbs.	—	—	81	523.—	17	513.—	2	500.—
Spalt **)	880,000 „	—	—	93	638.—	7	623.—	—	—
Tettnang	35,000 „	—	—	—	—	—	—	—	—
Hersbruck	310,000 „	—	—	77	502.—	22	486.—	1	470.—
Wurttemberg	170,000 „	—	560.—	50	545.—	—	530.—	—	515.—
Jura	65,000 „	—	—	74.5	600.—	22.5	580.—	3	560.—

*) Increase for seals Au, Mainburg, Wolnzach, grade I and II, DM 7.— per 50 kilos.

**) About 60% of Spalt hops were delivered ready baled by farmers at a price increase of DM 15.— per 50 kilos.

The cooperatives had a broader basis of operations in Hallertau and Spalt hops crop 1956. It appears, however, that the volume of Spalt hops has been somewhat too high, as sales progressed slowly and stocks could be sold out only in May 1957.

Nürnberg Market

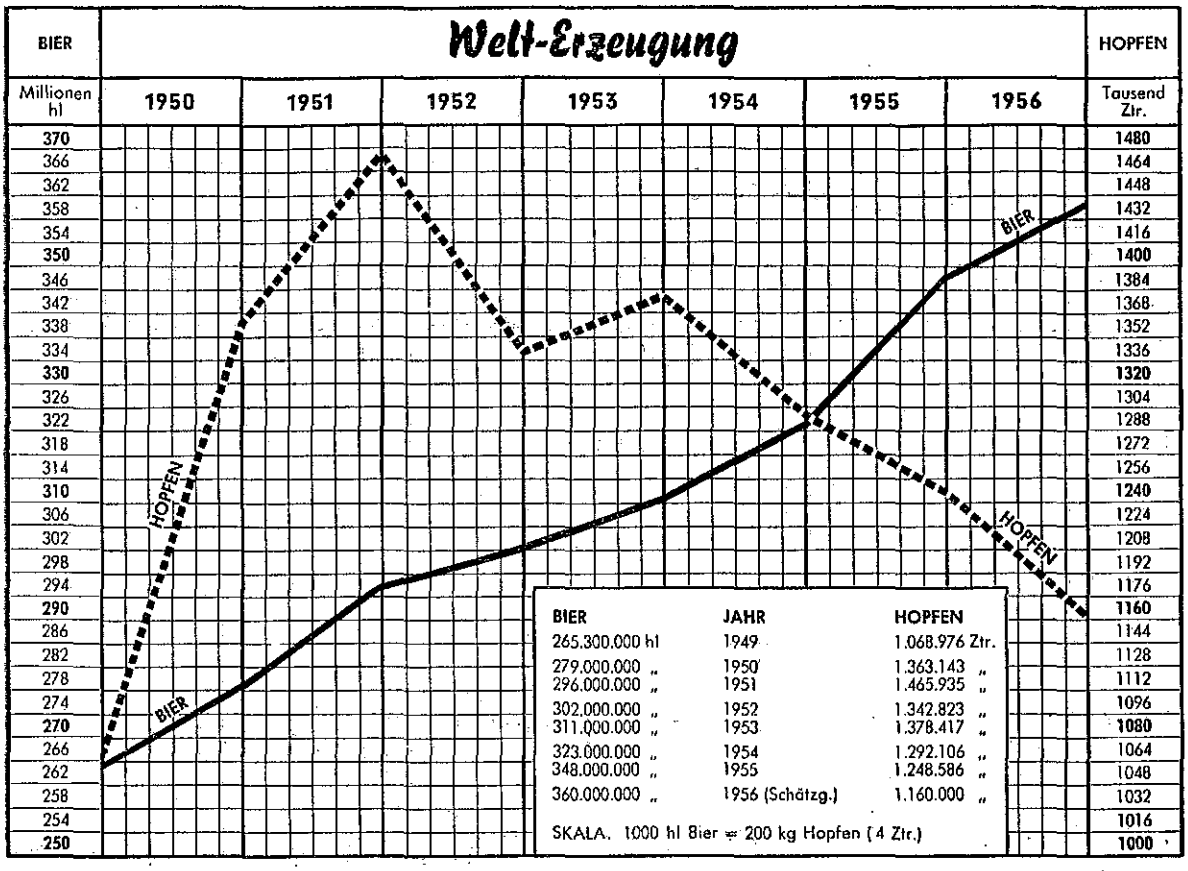
The very active purchasing in the districts of production at the beginning of the season 1956 relegated the functions of the Nürnberg Market to the background for some time. Trading on the market developed only after prices in the Hallertau began moving. Hallertau hops in provisional packing were quoted at DM 620.—/635.— at the beginning of October 1956. This quotation went down by abt. DM 10.—/20.—, as demand became slack, but the supply was too small so that a more pronounced decrease in price could not result.

The very calm situation on the market changed abruptly, as considerable purchases for exports and deliveries to Eastern Germany during the middle of March 1957 laid bare the shrunken basis of available hops. Prices for Hallertau hops rose up to DM 665.— within a few days and the quotation stood nominally at DM 685.— by the end of April, although there were practically no hops available. This was abt. DM 10.— over prices for Spalt hops, which did not take part in the market's upswing owing to the surplus of this provenience. These hops, which were owned mostly by the cooperative, were sold to a considerable extent until the end of May 1957, as demand continued.

Market Survey

Production of hops has decreased since 1953, whereas beer output has increased considerably during the same time. As a result of higher hop consumption and smaller inventories in breweries, the tendency for quick and sometimes stormy purchases in the districts of production was to be noted on practically all places of the hop world market. Prices for hops crop 1956 could soon reach their highest level and maintain same. As a consequence of active demand, the world market was disencumbered to a considerable extent from older hops especially in the US-market.

World Production of Beer and Hops



The relative position of the two lines indicates the development of the hop world market from a buyer's to a seller's market.

Plant Protection

According to a decree of April 11th, 1950 (BGBl. I. S. 94) and based upon § 2 of the corresponding law of August 26th, 1949, authorities of the *Laender* are now invested with the power to issue measures for the **protection of commercial plants** against pests and diseases. The *Bayerische Staatsministerium für Ernährung, Landwirtschaft und Forsten* has published measures for the control of **Downy Mildew** on November 16th, 1956. Furthermore, the destruction of **wild hops** has been regulated by a decree of the *Bayerische Staatsministerium für Ernährung, Landwirtschaft und Forsten* of November 21st, 1956, substituting therewith the former scattered measures by local authorities.

Verticillium Wilt

A further decree of December 12th, 1956 (GVBl. S. 353) for the control of **Verticillium Wilt** is of especial importance. There are reasons to suppose that the sudden wilting of hop vines is a result of simultaneous damages by vegetal and animal parasites. Up to now there exist no reliable means of control and at present this disease of epidemic character can only be checked by laying idle affected hop yards. The Hop Growers Union has constituted a commission to study the disease.

Hop Drying

The wet growth during 1956 led to difficulties as the generally coarse and sapful sprig of the hop cones required specially careful kilning. As a consequence possibly of the hectic season, farmers did not always attend to this in the usual good way and deliveries of hops from farms sometimes gave reason for complaints.

Hop Picking

The kilning of the hops is exclusively the responsibility of the hop farmer. On the other hand, however, it has been noted that clean picking as compared to the usual good work in former years is no longer quite possible under present conditions. Hop picking is not a very attractive work and this as well as sufficient chances for steady work in the industry result in the present lack of labour. For the hop harvest abt. 110,000 hands are needed in all, of which 60—65,000 alone in the Hallertau. Payment for picking of one basket of hops in the Hallertau (60 Liter) developed as follows:

1939	1948/49	1950	1951/54	1955
RM —.40	DM —.50	DM —.75	DM —.80	DM 1.—

A payment of DM 1.10 net without any deductions, board and lodging free, and transportation to and from work paid in full, had been agreed upon for crop 1956. Lack of pickers, however, resulted in this payment being over-reached. Generally DM 1.50 has been paid and in parts even DM 2.— per basket.

Machine Picking

This situation turns unavoidable the introduction of hop picking machines. Eight machines worked in Germany during the harvest of 1956. Disadvantages of picking by machine such as loss of cones, cutting of vines etc. are markedly offset by the fact that wages are about 85—90 % less than compared to manual picking.

During the coming harvest 1957 it is expected that from 15 to 20 machines will be available in the German districts of production. Even so, only 3 % of the expected harvest will be picked by machine.

Turnover Tax

Since January 1st, 1957, the preparation of hops is subject to a turnover tax of 1% for transactions within Germany. Farmers continue to be free from this tax. Regulations have not been changed, however, for the eventual refunding of the excise tax in case of exportation so that it remains necessary to continue efforts to solve this vexing question.

German Hop Exports 1956

Export of German Hops Crop 1956

September 1st, 1956 — March 31th, 1957

Country	lbs.	lbs.	Country	lbs.	lbs.
Belgium	672,403		b. f.		9,219,858
Bulgaria	22,046		Ethiopia	5,732	
Denmark	356,043		Algiers	22,046	
Finland	12,346		Angola	10,362	
France	1,057,106		Belgian Congo	168,432	
Greece	44,092		British East Africa	24,251	
Great Britain	343,036		French Equat. Africa	4,409	
Italy	581,133		French Morocco	59,524	
Jugoslavia	37,037		French West Africa	28,660	
Canary Islands	22,487		Lybia	3,527	
Luxembourg	107,584		Moçambique	8,818	
Malta	441		Nigeria	18,739	
Netherlands	757,280		Span. Morocco	22,046	
Norway	147,928		Union of South Africa	12,125	
Austria	918,216		South West Africa	5,732	
Poland	291,007		Tunisia	22,046	
Portugal	107,805				
Roumania	264,552		**Africa**		416,449
Saar	124,560				
Spain	4,409		Cyprus	6,834	
Sweden	458,998		Hongkong	34,833	
Switzerland	422,181		India	16,755	
Czechoslovakia	43,210		Indonesia	33,069	
			Iraq	12,346	
Europe		6,795,900	Iran	15,432	
			Israel	22,046	
Argentine	224,869		Japan	365,082	
Bolivia	4,409		Korea	28,660	
Brazil	123,017		Lebanon	8,818	
Brit. West Indies	6,614		Malayan States	29,762	
Chile	1,984		Philippine Isl.	69,886	
Colombia	46,297		Syria	1,984	
Costa Rica	9,039		Thailand	23,809	
Guatemala	4,409		Turkey	15,432	
Honduras	13,889		Viet-Nam	33,069	
Mexico	2,645				
Paraguay	19,842		**Asia**		717,817
Peru	23,369				
U.S.A.	1,830,038		Australia	7,275	
Venezuela	113,537		French Pacific Isl.	1,764	
America		2,423,958	**Australia**		9,039
c. f.		9,219,858	Total		10,363,163

German Hop Imports 1956

The following lots of hops were imported from September 1st, 1956, to March 31st, 1957:

Great Britain	298,062	lbs.
Belgium	7,055	„
Jugoslavia	283,291	„
Czechoslovakia	313,273	„
U.S.A.	426,370	„
Total	1,328,051	lbs.

Hop Acreage 1956

Verification of the hopacreage in Germany during 1956 resulted in the following figures:

Districts	1939 Acreage acres	1956 Existing acreage acres	1956 Additional acreage acres	1956 Total acres
Hallertau	11,317	12,721	185	12,906
Spalt	2,276	2,140	37	2,177
Hersbruck	2,118	1,458	15	1,473
Jura	200	316	—	316
Tettnang *)	—	25	—	25
Aischgrund/other distr.	200	19	—	19
Bavaria	**16,111**	**16,679**	**237**	**16,916**
Wurttemberg/RHW	1,223	509	—	509
Tettnang **)	1,636	1,668	7	1,675
Baden	440	72	—	72
Baden-Wurttemberg	**3,299**	**2,249**	**7**	**2,256**
Pfalz	151	69	—	69
Rheinland-Pfalz	**151**	**69**	**—**	**69**
Germany	**19,561**	**18,997**	**244**	**19,241**

*) areas in Bavaria **) except areas in Bavaria

Hop Acreage 1957

According to the decree of April 13th, 1954, Federal Authorities have to determine the hop acreage from year to year after hearing all interested circles. Representatives of farmers did not want an increase of acreage in 1957, although the development of prices for hops in 1955 and 1956 indicated a too small production as compared to the constantly increasing demand. The brewing industry is interested in an expansion of acreage and that would be very welcome, too, in the interest of deliveries to important customers abroad and overseas.

After extensive discussions the *Bundesministerium für Ernährung, Landwirtschaft und Forsten* on October 12th, 1956, allotted the acreage on a somewhat increased basis for 1957 as follows:

Bavaria	17,705	acres
Baden-Wurttemberg	2,471	„
Rheinland-Pfalz	86	„
Total	20,262	acres

In this connection the following summary about changes in the hop acreage in Germany might be of interest:

Crop Year	Acreage	Fluctuation against the preceding year	Official allotment
1950	16,904 acres	—	—
1951	18,686 „	+ 1,782 acres	20,316 acres
1952	19,036 „	+ 350 „	20,756 „
1953	21,053 „	+ 2,017 „	22,239 „
1954	19,876 „	— 1,177 „	20,981 „
1955	19,195 „	— 681 „	20,981 „
1956	19,241 „	+ 46 „	19,397 „
1957	—	—	20,262 „

The acreage of the last year before the war (1939 = 19,561 acres) had been regained and surpassed for the first time in 1953. The record crop harvested in that year coupled with a corresponding decrease in price led to a remarkable shrinking of acreage both in 1954 and 1955 and only in 1956 an insignificant increase became visible.

It has to be taken into consideration that expansions of acreage come into bearing only after two years, whereas the ploughing out of hops has immediate influence upon the crop results. Hop acreages, therefore, have to be planned anticipating future trends and independently of passing influences.

Deutsche Demokratische Republik (D.D.R.)

DM 10,000,000.— were available for the purchase of hops from Western Germany in 1956. Only 2,000 cwts. of older hops, however, were bought at the start as authorities in the DDR preferred to maintain a waiting attitude. More important orders were placed by the end of 1956 and including several quantities of older hops total deliveries are estimated at about 12,000 cwts. The issue of licences was sometimes delayed.

There are no informations obtainable up to now regarding the extent of hop cultivation in the DDR. It has been reported that spring work in the hop gardens was finished in part not sooner than the middle of May 1956. Rainfalls were distributed as follows:

Jan.	Febr.	March	April	May	June	July	Aug.	Sept.
29.9	20.8	34.3	88.0	60.1	186.0	194.8	71.7	27.7 mm

In spite of wet weather in 1956 **Downy Mildew** did not develop as intensively as expected, whereas **Aphids** appeared very strongly in all districts of production. It is regrettable to report that in some locations **Verticillium Wilt** has been noted.

Hop vines reached the height of the trellises during the first half of July, but overhang was seen only in early uncovered gardens. **Bloom** began on July 25th. **Picking** started on September 2nd and was finished within a fortnight under favourable weather conditions. Locally there was a lack of labour.

The **quality** of hops crop 1956 was judged to be less good than the year before, as warm weather and sunshine were lacking especially during the formation of the cones. Bitter values were lower than the year before. 85 baskets of 30 Liter each were necessary for one cwt. of hops in 1955, whereas 95 baskets were needed in 1956. The entire crop is handled centrally at prices, which are as follows (DM-East for hops with no more than 12% humidity);

Grade I DM 1,000.— per 50 kilos
Grade II DM 900.— per 50 kilos
Grade III DM 800.— per 50 kilos
Grade IV DM 700.— per 50 kilos
Grade V DM 600.— per 50 kilos.

USSR

It can be surmised that the crop of hops in 1956 was less than the year before, as offers of Russian hops on the world market were smaller than in other years.

It has been reported that there exist in Russia about 420 breweries. The most important brewery is in Moscow and produces 1,000,000 hl. Two other breweries in Moscow make 650,000 hl each. There are three breweries as well in Leningrad (two of 750,000 hl each, one of 400,000 hl). It is said that present plans call for the construction of another 140 breweries during the next ten years.

Russian beer contains from 130 to 180 degrees original wort (11% to 20% *Stammwürze).* Prices are from Rouble 2.40/5.— per bottle (0.5 Liter) ex brewery and Rouble 3.60/6.— to consumers. Consumption per head and year is indicated at 32 ltrs. in Moscow, 26 ltrs. in Leningrad, and 10 ltrs. on the average for the whole of Russia.

Poland

Spring work was finished only by the middle of May 1956 as a consequence of adverse weather conditions. Precipitations were sufficient in April and May but temperatures were too low in May and only rose in June of 1956. Exceptional high rainfalls were experienced by the end of June and during July so that sunshine was lacking for **Blooming** and the **Formation of the Cones.** The ripening of the hops was delayed. About half of the gardens showed a pointed aspect. **Downy Mildew** was not so extensive as in 1955 whereas **Aphids** appeared rather strongly several times and had to be controlled with nicotine dustings. The harvest began about August 20th and was finished by the middle of September under generally dry weather conditions. There was no lack of labour.

The hops were not fully ripened as a result of unfavourable weather and showed a lower content of lupulin. The colour was somewhat spotted but damages by Downy Mildew were less than in 1955. The quality was estimated as follows: choice 10.8%, medium 85.5%, off-grade 3.7%.

The hops are handled centrally and at fixed quotations and were sold out until the end of 1956.

Czechoslovakia

The hop plants had wintered well in spite of the long winter and extreme cold. Growth was retarded during the spring of 1956, but this could be offset to some degree as a consequence of satisfactory rains and favourable temperatures during the month of June. The stand of the gardens was unequal as early uncovered yards had already attained two thirds of the height of the trellises whereas on the average half of the height had not been passed yet. The height of the trellises was reached during the first half of July. The vines were not as strong as normal and a considerable part of the hop yards remained pointed. Cones had not ripened on the lower third of the vines. Diseases were less in evidence, but **Aphids** had to be carefully controlled. **Picking** began on August 20th and was in full swing on August 25th. There were thirty hop picking machines in use.

The hops of crop 1956 were better in colour and formation of the cones than the year before. The entire crop is centrally handled. As the brewing industry maintained sufficient inventories of hops, all demands for export could be met in spite of a smaller crop. The balance of hops available for exports was practically sold out within four weeks.

Considerable efforts are under way in Czechoslovakia to rationalize hop cultivation and harvest. Important orders have been placed for hop picking installations and cultivating machines.

Jugoslavia

Severe winter weather until March 1956 retarded spring work and growth. **Fleas** appeared rather strongly especially in gardens on sandy locations as a consequence of dry weather in May. Until June climatic conditions were cool with occasional rainfalls, which were distributed as follows in the district of **Sanntal (Slovenia):**

Jan.	Febr.	March	April	May	June	July	Aug.	Sept.
50.4	44.9	19.8	134.9	211.2	229.1	74.2	97.7	76.4 mm

Warm and sunshiny weather in July benefited growth so that the plant could well develop until picking time. Damages by **Pests** and **Diseases** were negligible whereas **Hails** and a heavy **Storm** occasioned considerable damage. The hops reached the height of the trellises by the middle of July. **Bloom** during the second half of July was normal. **Picking** was in full swing on August 20th and finished around September 6th under good weather conditions. There was no lack of labour.

Styrian hops showed a good formation of the cones and were better in colour and quality than the year before. These hops are distinguished by high bitter values. The crop was estimated as 94% choice, 4% medium and 2% off-grade. All hops are handled centrally at official prices and the crop was speedily sold out.

In the district of **Backa** it is intended to considerably expand the acreage, as demand could not be met during the last years. Abt. 272 acres of new hop gardens have been planted in the spring of 1957.

Spring work in 1956 was finished in good time. The weather was wet and warm during May and June and **Downy Mildew** had to be controlled carefully in June and July. The height of the trellises was reached by the end of May/beginning of June. The hops were in **Bloom** during the second half of July and showed a normal overhang. About 20% of the cones ripened on the lower third of the vines. Shortly before harvest **Red Spider** had to be carefully controlled but did no great damage. **Picking** began on August 26th and was finished under good weather conditions until September 5th. There were sufficient pickers available.

Compared to the year before, colour and formation of the cones as well as quality were better in 1956. The crop was estimated as 82% choice, 13% medium and 5% off-grade. The entire crop was delivered to the warehouses and sold until the end of September.

Belgium

The hop gardens had a slow start as the weather remained cold until the beginning of May 1956. Precipitations were distributed as follows:

Jan.	Febr.	March	April	May	June	July	Aug.	Sept.
16.2	15.0	10.2	5.4	11.4	121.6	86.2	76.4	48.8 mm

The rainy weather favoured **Downy Mildew**, which had to be carefully controlled. Pests could be held down with the usual sprayings. The height of the trellises was reached at the beginning of July. Early **Bloom** was noted on July 15th and blooming was general by the end of that month. Cones on the lower part of the vines were less ripened than usual. Heavy **Storm Damages** by the end of July materially reduced the bulk of the crop.

Picking started sporadically on September 5th, was in full swing on September 10th and finished by September 22nd. Picking by machine has started in Belgium, too, but for the time being only small quantities have thus been harvested. The crop was estimated as 25% choice, 60% medium and 15% off-grade. The hops were smaller in size and less uniform in colour than usual.

The crop was sold rapidly. The district of Alost was sold out already by the end of November. Prices started in mid-September on the basis of Bfrs. 5,500.—/5,700.—, reached Bfrs. 6,000.— at the beginning of October and Bfrs. 6,200.— the first days of November. In Poperinghe quotations started at Bfrs. 4,500.— (type Hallertau) at the beginning of September, reached Bfrs. 5,500.— within a fortnight and scored Bfrs. 6,500.— by the end of that month. Remaining small lots were sold out later on at somewhat lower prices.

The following quantities of hops crop 1956 have been imported from September 1st, 1956, until January 31st, 1957:

	lbs.		lbs.
Western Germany . . .	716,715	b. f.	1,157,194
U.S.A.	370,373	Canada	7,716
France	33,951	Poland	48,942
Netherlands	2,866	England	161,818
USSR.	11,243	Czechoslovakia	1,066,806
Triest	22,046	Jugoslavia	255,734
c. f.	1,157,194	Total	2,698,210

Exports of Belgian hops from September 1st, 1956, until January 31st, 1957, are shown as follows:

	lbs.		lbs.
Belgian Congo	31,085	b. f.	131,173
Western Germany	4,409	Moçambique	1,543
Austria	441	Norway	5,291
Brazil	4,189	Eastern Pakistan	1,543
Denmark	13,227	Netherlands	5,071
U.S.A.	38,360	England	36,596
Malayan States	882	Sweden	6,614
Finland	15,432	Switzerland	12,125
France	14,109	Union of South Africa	4,630
India	6,614	Czechoslovakia	55,115
Kenya-Uganda	2,425	Venezuela	40,124
c. f.	131,173	Total	299,825

France

Rainfalls in France were distributed as follows:

	Febr.	March	April	May	June	July	August	Sept.
Alsace	13.5	21.5	91.5	77.5	67.2	110.6	108.5	61.8 mm
Flanders	1.4	4.5	13.8	0.3	65.0	75.0	109.1	84.6 mm

In the **Alsace,** spring work as well as the start of growth were delayed by the cold weather. Climatic conditions remained unstable with occasional **Night Frosts** until April 1956. Cutting began sporadically during the first week of April and was in full swing only by the end of that month. The weather was not unfavourable in May, so that the gardens could develop normally. It remained unstable, however, during the entire period of vegetative growth and the hops reached the height of the trellises only about the end of July. The vines showed first **Bloom** about the middle of July and were in full bloom by the end of that month. Hop yards on the average, however, showed a pointed aspect and the set of cones was not so full as normal.

The weather in August was not favourable for the **Formation of the Cones,** which set in during the beginning of that month. **Picking** started on September 5th, was general on September 10th and finished within about three weeks later under generally good weather conditions.

The Alsacian hops crop 1956 were good in colour and quality, but the size of the cones was not quite uniform. The crop was estimated as 95% choice, 4% medium and only 1% off-grade.

Purchases in the Alsace developed rather speedily. Prices reached quickly the highest level at about Ffrs. 43/50,000.—. The district was sold out already at the beginning of October.

In **Flanders,** growth was retarded at the start by dry and cold weather. The hops reached the height of the trellises during the first half of July, but showed a pointed stand on the average. The cones on the lower third of the vines ripened completely. **Picking** began on September 1st and was finished on September 27th during good weather. There were sufficient pickers for the small crop. Two picking machines were in experimental use.

The hops were of pale-green colour and good formation of the cones, but there was less lupulin than usual. The crop was estimated as 50% choice, 35% medium and 15% off-grade.

Prices set in on the basis of Ffrs. 30,000.— the first days of September, rose quickly to Ffrs. 35,000.—, reached Ffrs. 45,000.— at the beginning of October and stood at Ffrs. 50,000.— by the middle of that month. The crop was sold out until the end of the year with the exception of small remaining lots.

French hop imports for the calendar year 1956 were as follows:

Countries	Jan. – June lbs.	July – Dec. lbs.	1956 Total lbs.
Belgium-Luxembourg	—	4,850	4,850
Western Germany	997,581	251,324	1,248,905
Jugoslavia	143,960	116,623	260,583
Czechoslovakia	330,690	20,944	351,634
Total	1,472,231	393,741	1,865,972

Exports of French hops in 1956 were as follows:

Destination	Jan. – June lbs.	July – Dec. lbs.	1956 Total lbs.
Algiers	33,731	118,607	152,338
Belgium-Luxembourg	60,627	50,485	111,112
Denmark	5,291	55,776	61,067
Western Germany	54,674	12,787	67,461
Deutsche Demokratische Republik	287,259	—	287,259
England	441	—	441
Finland	9,700	1,764	11,464
French Equatorial Africa	—	882	882
French Pacific Isl.	5,291	661	5,952
Madagascar	441	—	441
Martinique	—	441	441
Netherlands	1,102	—	1,102
Norway	—	2,646	2,646
Austria	220	68,122	68,342
Spain	—	8,378	8,378
Tunisia	—	6,834	6,834
U.S.A.	—	661	661
Vietnam	11,023	—	11,023
Total	469,800	328,044	797,844

Austria

In the district of **Muehlviertel** an abnormally warm January was followed by severe **Frost** in February 1956. The earth was covered with **Snow** until March. The weather was very rainy until August and only became dry in September. The development of the hops suffered under these conditions, but the plant reached the height of the trellises during the second half of July and showed strong overhang. There were scarcely any cones on the lower third of the vines. **Picking**, which was hampered by rain during the first days, went on from August 28th to September 15th. The hops were better in quality, colour and formation of the cones than the year before, but had a lower content of lupulin. Abt. 35,274 lbs. were harvested on an acreage of 46 acres (7.5 acres new gardens) and the crop was estimated as 75% choice, 17% medium and 8% off-grade.

In **Styria** an acreage of 45 acres brought a harvest of 66,140 lbs. (1,455 lbs. per acre).

Switzerland

A cold February was followed by normal weather during spring time and cool and rainy weather during the months of June, July and August, which moderated only in September.

Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
67	12	17	79	81	68	139	165	57	91	31	18 mm

The development of the hops was retarded so that the height of the trellises was only reached at the beginning of July. The hops were in full **Bloom** by the end of that month and showed a good overhang. There were practically no cones on the lower third of the vines. **Picking** went on from the 23rd of August to September 8th and suffered from a pronounced lack of pickers and adverse, mostly rainy weather. The colour of the hops was not so good as the year before and bitter values were about 10% lower. The crop was estimated as 82% choice, 16% medium and 2% off-grade. Abt. 26,450 lbs. were harvested on the unchanged acreage of 17 acres. Prices were: Grade I Sfrs. 610.—, grade Ib Sfrs. 600.—, grade II Sfrs. 570.— and grade III Sfrs. 450.—.

Turkey

As wild hops had been discovered some years ago in this country, an experimental hop yard was installed in that location, but did not give satisfactory results. Experiments with the cultivation of hops are now under way on the official agricultural station near Constantinople.

Spain

In Spain the acreage has been increased abt. 7% as against 1955. The following quantities have been harvested:

Galicia	266,669 lbs.
León	325,783 „
Asturias	45,087 „
Vasco-Navarra	12,857 „
Total	650,396 lbs.

The wet growth in 1956 resulted in a more extended infection of **Downy Mildew** than the year before. On the average, however, the quality of the hops was better than in 1955 and was estimated as 60.2% choice, 35.3% medium and only 4.5% off-grade.

England

Severe and long persistent **Frosts** during the spring of 1956 in connection with a subsequent period of **Dryness**, which held on for more than one month, hampered the development of the hops. Growth continued to suffer under almost constantly rainy weather with insufficient sunshine, which prevailed until harvest. In addition, considerable **Storm Damages** occurred by the end of July and a number of hop yards suffered from **Hails.** Under these adverse conditions the growth and development of the plants was retarded. Hop yards just reached the height of the trellises on the average and showed scarcely any overhang. It was necessary to carefully control **Downy Mildew** until harvest time to protect the hop yards against this disease. **Picking** began during the first week of September and was finished by the end of that month under dry weather. About one third of the English crop is picked by machine and there were sufficient pickers available for the balance of the harvest. The quality of the English hops crop 1956 was estimated as little under average. The hops had a weaker aroma than usual, but were better ripened than expected. Fuggle hops were estimated as 27.6% choice, 65.6% medium and 6.8% off-grade, whereas Goldings and other varieties, which comprise only 25% of the English crop, were estimated as 43.6% choice, 49.1% medium and 7.3% off-grade.

As a result of a considerably smaller crop than the year before, a cut of 25% on all advance contracts resulted. The average price to farmers was fixed at £ 35.2.— per cwt.

First signs of **Verticillium Wilt** had been noted in England already in 1930. At the beginning, however, the danger of this disease was not realised and in 1955 hop yards already of 20% of all hop farmers in England had been affected. Registration of Verticillium Wilt is compulsory since 1947.

Exports of English Hops Crop 1956

September 1 st, 1956 — April 30th, 1957

Country	cwts.	Country	cwts.
Australia	1,219	b. f.	24,453
Belgium	1,341	Malta and Gozo	376
Canada	905	Netherlands	105
Ceylon	168	Pakistan	22
Cyprus	19	Moçambique	1
Denmark	40	Rhodesia and Nyassa	654
Western Germany	19	Singapore	721
Fiji-Islands	5	Union of South Africa	386
Finland	59	Sweden	36
India	3	Switzerland	24
Iraq	39	Tanganyika	17
Eire	20,245	Trinidad	9
Jamaica	2	Uruguay	59
Channel Islands	253	West-Samoa and Ross	2
Kenya	134	Total.	26,865
Malaya	2		
c. f.	24,453	1 cwt. = 50,8 kilos	

U.S.A.

Hop yards in the district of **Sacramento** suffered from **Floods** locally. Growth was hampered by cool weather in 1956. Sprayings against **Downy Mildew** were effected up to three times. Precipitations were as follows:

Jan.	Febr.	March	April	May	June	July	August	September
7.58	5.82	2.43	1.86	0.96	—	—	—	— inch.

The hops reached the height of the trellises at the beginning of June and were in **Bloom** on July 20th. The aspect of the hop yards remained pointed on the average. **Picking** began on August 20th and was finished in good time under generally good weather conditions in September. The harvest is entirely mechanised. The crop was estimated as follows: 80% choice, 19% medium, 1% off-grade.

Western Oregon. The hop plants could develop satisfactorily in spite of sometimes hot weather in May 1956. These climatic conditions, however, resulted in an especially **Early Bloom** of Fuggles hops. Precipitations were as follows:

Jan.	Febr.	March	April	May	June	July	Aug.	Sept.
12.68	5.42	5.91	0.64	1.61	1.20	—	0.37	0.87 inch.

Sprayings against **Downy Mildew** were effected up to eight times. The plants reached the height of the trellises by the middle of June, but premature **Bloom** was noted sporadically already on June 12th, 1956. Hop yards showed a good overhang on the average and cones ripened on the lower third of the vines. **Picking** of Fuggle hops began on August 13th and the harvest of Clusters at the beginning of September. Picking of both varieties required about one fortnight each. The harvest is entirely mechanised.

The hops of crop 1956 were not quite as good in colour, lupulin and formation of the cones as the year before and the crop was estimated as 60% choice, 35% medium and 5% off-grade.

Eastern Oregon and Idaho. The weather in 1956 was favourable for the hops. Temperatures were somewhat higher than average. Rains were distributed as follows:

Jan.	Febr.	March	April	May	June	July	Aug.	Sept.
2.34	0.34	0.09	0.24	1.10	0.58	0.15	0.14	— inch.

Sprayings against **Aphids** and **Red Spider** were effected up to three times. **Bloom** started sporadically at the beginning of July and the hops were in full bloom by the middle of that month and showed a good overhang. The completely mechanised harvest began on August 23rd and was finished under good weather conditions within a month. The hops were better ripened than during the preceding three years and estimated as 60% choice and 40% medium.

Washington. In 1955/56 there was a severe winter in the district of Yakima with exceptional **Snowfalls.** Gardens showed locally considerable **Frost Damages.** Constant wet and warm weather in June and July 1956 resulted in damages from **Downy Mildew**, which had to be carefully controlled. **Aphids** and **Red Spider** could be held in check with usual insecticides. Rainfalls were distributed as follows:

Jan.	Febr.	March	April	May	June	July	Aug.	Sept.
3.25	0.81	0.21	—	0.48	1.81	0.02	0.10	0.54 inch.

Early varieties reached the height of the trellises at the beginning of June, late hops by the end of that month. **Bloom** set in around June 20th, 1956, in early yards and about three weeks later on late varieties. **Picking** began on August 16th and was finished within 30 days under excellent weather conditions. Late hops were not quite ripe yet, when the picking of the early varieties had already come to its close. The hops showed better sized cones than in 1955 and the quality, which was better than the year before, was estimated as 20% choice, 60% medium, 20% off-grade.

Hop Imports U.S.A.

Hop Imports U.S.A. Crop 1956

September 1st, 1956 — February 28th, 1957

Country	US-Pounds	Ztr. je 50 kg
Belgium/Luxembourg	38,580	350
Western Germany	2,214,843	20,092
France	661	6
Jugoslavia	1,412,378	12,813
Canada	1,849	17
Total	3,668,311	33,278

Hop Exports U.S.A.

Exports of US-Hops Crop 1956

September 1st, 1956 — February 28th, 1957

Country	lbs.	Ztr. je 50 kilos	Country	lbs.	Ztr. je 50 kilos
Ethiopia	13,228	120	b. f.	5,860,879	53,171
Angola	2,205	20	India	9,200	83
Argentine	88,371	802	Indochina	110,230	1,000
Australia	57,359	520	Eire	740,645	6,719
Belgium/Luxembourg	963,863	8,744	Israel	11,023	100
Belgian Congo	99,925	907	Jamaica	29,943	272
Bolivia	45,089	409	Mexico	2,373,988	21,537
Brazil	285,164	2,587	Moçambique	19,200	174
Canada	1,419,336	12,876	Nicaragua	2,203	20
Ceylon	20,310	184	Netherlands	364,562	3,307
Chile	220,459	2,000	Norway	52,218	474
Columbia	1,305,316	11,842	Austria	35,789	325
Costa Rica	17,665	160	Panama	50,179	455
Cuba	213,224	1,934	Peru	147,856	1,342
Denmark	190,697	1,730	Philippine Islands	67,241	610
Western Germany	811,400	7,361	Salvador	51,233	465
Dominican Republic	7,000	65	Union of South Africa	244,100	2,214
Ecuador	8,818	80	Sweden	45,504	413
Greece	22,000	200	Switzerland	406,246	3,685
Guatemala	20,897	190	Uruguay	63,425	576
Haiti	2,000	18	Venezuela	334,699	3,036
Honduras	38,153	346	Vietnam	22,046	200
Hongkong	8,400	76	Other Countries	137,176	1,244
c. f.	5,860,879	53,171	Total	11,179,585	101,422

Canada

The consequences of the cold winter 1955/56 were to be noted by locally varied **Frost Damages** in the hop yards. Precipitations were as follows:

	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Kamloops	0.74	0.61	0.06	0.05	0.62	1.31	1.43	0.03	0.03	0.27	1.26	2.53 inch.
Fraser Valley	4.10	5.67	5.14	5.59	4.80	2.39	2.38	0.24	1.93	8.66	10.39	8.17 inch.

Under generally favourable weather in 1956 the hops in the district of **Kamloops** reached the height of the trellises by June 10th and showed a good overhang. The crop was harvested in September under favourable weather and was estimated as 80% choice, 15% medium, 5% off-grade.

Whereas in this district no control of diseases and pests is necessary, sprayings against **Downy Mildew** had to be effected every 8 or 10 days in the district of **Fraser Valley.** These sprayings were combined with preparations against insects. The hops reached the height of the trellises in mid-July. **Picking** started at the beginning of September and is done mostly by machine. The crop 1956 was smaller than the year before, but was estimated better in quality than in 1955.

Japan

The development of the hops in Japan in 1956 was favoured by climatic conditions. Rainfalls were as follows:

	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.
Nagano	86.3	46.8	60.6	97.1	117.8	121.2	124.6	128	159.8 mm

The hops reached the height of the trellises by mid-June and showed a good overhang. Sprayings against pests and diseases were effected 10 to 12 times on the average. **Bloom** started on June 28th. Crop prospects were better than on the average, as **Picking** started on August 15th. Unfortunately the hop yards were severely damaged by a **Typhoon** on August 17th so that the estimated harvest yield was reduced by 15%. The quality of the hops, too, suffered in consequence of the storm. The harvest was finished on September 10th. Picking is entirely manual, but there was sufficient labour available.

As a result of the storm during the harvest a relatively high percentage of damaged cones was noted. The quality of the crop was judged to be not so good as the year before, but lupulin was amply present. The crop was estimated as follows: 59.6 % choice, 35.6 % medium, 4.8 % off-grade.

The entire crop is taken over by sponsoring breweries in Japan at the following prices:

choice	Yen 19,150.— per 50 kilos	($ 53.—)
medium A	Yen 16,900.— „ 50 „	($ 46.50)
medium B	Yen 14,800.— „ 50 „	($ 41.—)
off-grade	Yen 10,000.— „ 50 „	($ 27.50).

New Zealand

In this country hops suffered neither from **Pests** nor **Diseases.** Growth of the hops in 1955/56 developed under favourable climatic conditions. Temperatures were higher than normal on the average. There was ample sunshine and sufficient humidity. Rainfalls were as follows:

1955					1956		
August	September	October	November	December	January	February	March
5.93	1.49	3.30	2.57	3.48	4.95	1.20	3.21 inch.

The hops had reached the height of the trellises by the end of December 1955 and showed a luxuriant overhang. **Picking** began on February 28th and was finished on March 20th, 1956, under dry weather conditions. There was no lack of labour. Four picking machines are in operation up to now.

The quality of the crop was better than the year before. The cones were of satisfactory formation and had a high content of lupulin. The crop was estimated as 92 % choice and only 8 % medium quality.

Crop 1957

The following informations have been received up to now from the Southern Hemisphere, where hops are picked in March of each year.

Argentine

Climatic conditions in 1956/57 were favourable for the hops in the districts of **Rio Negro** and **Neuquen.** A record crop of 162,172 lbs. could be harvested on an acreage of 196 acres. The crop of two hop yards was completely destroyed by **Red Spider,** whereas other gardens could be saved by timely sprayings. **Picking** suffered from lack of labour and was only finished by the middle of March 1957.

In the districts of **Sierra de la Ventana** and **Mar del Plata** the hops showed a favourable development until the blooming stage. In January 1957, however, an exceptional drought set in, which destroyed the bloom to a considerable extent. From an area of 120 acres only 29,145 lbs. could be harvested (Sierra de la Ventana 8,455 lbs., Mar del Plata 20,690 lbs.).

Tasmania

Newspaper clippings show that the crop of hops in 1957 in Tasmania has been considerably lower than expected. It is estimated that the result will be about 40 % less than in 1956.

Growth 1957 in Germany

The winter of 1956/57 was mild and only in January/February appeared **Frost** and **Snowfalls.** Exceptionally dry and warm weather set in during March, which benefited spring work. Later on, weather conditions during the spring of 1957 were not favourable for the growth of hops so that after a good start the development of the plants was retarded in the following months.

Hallertau. **Uncovering** and **Cutting** of the hops started already in the beginning of March and was finished during the first days of April. The new shoots grew vigorously under favourable weather. The development continued to be favoured by climatic conditions at the end of April/beginning of May, although temperatures were too low on the average. **Frosts** appeared until mid-May. Thereafter welcome rains set in and temperatures rose, but the development of the hops at that time was still retarded as against normal years.

Spalt. **Spring work** was finished under dry weather already at the beginning of April. Climatic conditions in April hampered the growth of the hops and the weather continued to be cold during the first half of May with occasional **Frosts.** Warmer weather and rains resulted in better development during the second half of May.

Tettnang. **Uncovering** and **Cutting** in this district was mostly finished already by the end of March 1957. Even in this district near the Lake of Constance the weather was too cold in April and there were **Snowfalls** and **Frosts** at the beginning of May 1957.

Hersbruck. **Spring work** started by the middle of March and was finished in mid-April 1957. No progress of the hop plants, however, was noted in April, as the weather was too cold. There were **Frosts** and cold weather even during the first part of May. Precipitations in April and May were less than normal.

Wurttemberg. **Spring work** in this district was finished in some yards already by the second half of March 1957. The hop yards showed scarcely any progress during April, but growth benefited from warmer weather in the beginning of May. The vegetative development of the plant suffered by **Frost** and **Snowfalls** in mid-May. Conditions during the second half of May were more favourable.

During the month of **June** 1957, hops could make good progress under fine summer weather and welcome rainfalls, which sometimes became ample. Retarded development during the cold weather in May has been offset to a considerable extent. Hop yards showed a healthy aspect and a normal growth of laterals. It is generally noted that the vines this year have less foliage than normally.

JOH. BARTH & SOHN

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Kern Druckerei Nürnberg