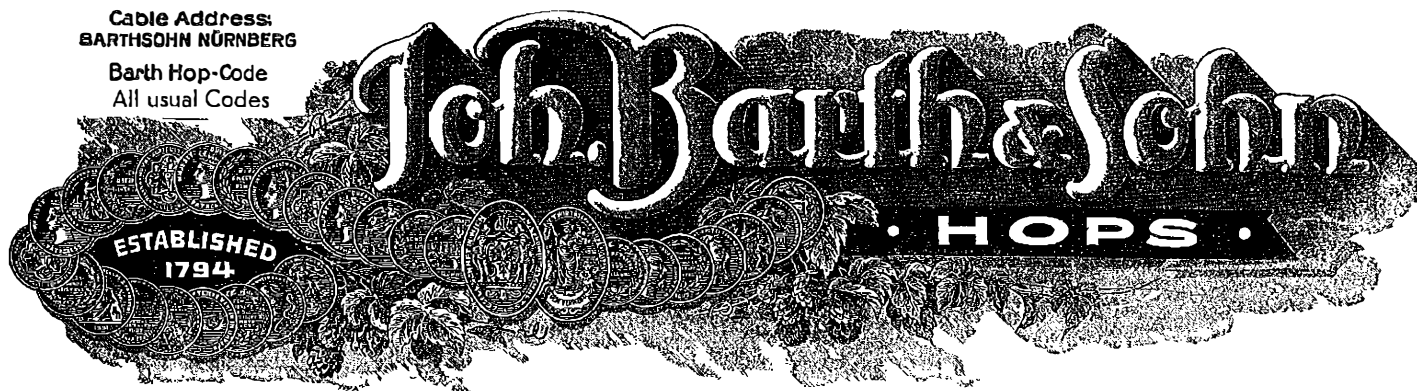


Cable Address:
BARTHSONN NÜRNBERG

Barth Hop-Code
All usual Codes



Home Office: Nuremberg, Germany
Branch Houses at Saaz, Strasbourg and New York
Hop Farm "Barthhof" in Hallertau (Bavaria)

New York, June 26th, 1937.
120, Wall Street

Hop Report for 1936/37.

Although the world's trade has received a slight stimulation in the course of the past year which has increased in the first quarter of this year, the restrictions hitherto existing continue to handicap it. The prices of the world's raw materials have been enhanced greatly and the economical restoration of many countries made further progress.

At about the end of September 1936 the so-called gold currencies and many others have been depreciated which fact, however, could not bring about a solution of the pending problems of the international traffic. The disquietude of the currencies continues and involves extraordinary risks for the international exchange of goods. The rising tendency of the economical position within Germany has continued; the unemployment figures fell from 1.491.000 in May 1936 to 776.000 in the same time this year.

The beer production of a country is said to reflect to a certain degree its economical position and the buying power of the population.

Beer Production.

In this connection we are glad to report that the following countries have been able to increase their beer production as compared with the previous year: Australia (10 p. c.), Belgium (3 p. c.), Bolivia (106 p. c.), Bulgaria (22 p. c.), Canada (18 p. c.), Chile (8 p. c.), China (27 p. c.), Columbia (22 p. c.), Corea (53 p. c.), Cuba (18 p. c.), Ecuador (36 p. c.), Esthonia (28 p. c.), Great Britain (3 p. c.), Greece (9 p. c.), Hungary (10 p. c.), Italy (58 p. c.), Japan (15 p. c.), Lithuania (20 p. c.), Livonia (4 p. c.), Mexico (21 p. c.), New Zealand (9 p. c.), Norway (8 p. c.), Peru (39 p. c.), Poland (10 p. c.), Sweden (1 p. c.), Union of South Africa (9 p. c.), Uruguay (56 p. c.), Venezuela (76 p. c.).

An extraordinarily large increase (24 p. c.) is noticed in U. S. A. with a production of 56.159.597 barrels as against 45.228.605 barrels in 1935. During the first four months of 1937 the rise has continued with 13,5 p. c. as compared with 1936.

The German beer consumption has risen by 102.252 barrels to 33.983.835 barrels.

Some of the countries with a retrograde movement of the beer production in 1935 have had a further decline in 1936, viz.: Algier, Austria, Czechoslovakia, Dantzig, France, Holland, San Salvador and Switzerland. The same refers to Ireland, Jugoslavia, Paraguay and Portugal as well as to Spain being in state of war at present. In Haiti the home production has ceased.

The world's beer production for 1936 figures at about 175.5 million barrels as against 162.8 million barrels in 1935. Its increase without U. S. A. is slow and shown in the following figures:

World's Beer Production.

1934 — 115.3 million barrels, 1935 — 117.7 million barrels, 1936 — 119.4 million barrels. The production of U. S. A. rapidly rose from about 21 million barrels in 1932 to 56.1 million barrels in 1936.

The next table shows the beer production for 1936 as per calendar year and financial year respectively, or else the year in question is expressly mentioned:

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Hop Acreage and Production in the years 1933 to 1936.

Producing countries	Acreage in acres				Yield per acre in pounds				Yields in 1000 pounds			
	1933	1934	1935	1936	1933	1934	1935	1936	1933	1934	1935	1936 ¹⁾
Hallertau	12,664	11,283	12,464	13,360	1,265	673	1,360	1,128	13,251	7,625	15,391	14,117
Spalt	3,272	2,481	2,701	2,938	400	687	700	861	1,173	1,710	1,744	2,332
Hersbruck	2,617	2,441	2,755	3,239	441	812	651	334	936	1,991	1,598	927
Aischgrund	402	324	366	410	107	392	464	183	30	127	151	68
Jura	193	153	193	301	356	531	968	642	54	82	149	124
Rheinpfalz	694	133	141	153	455	865	1,694	1,128	316	115	226	159
Other districts without seal		245	245	247		861	794	892		211	195	547 ²⁾
Bavaria	19,842	17,060	18,865	20,648	950	691	1,137	968	15,760	11,861	19,454	18,274
Tettngau	3,064	1,357	1,611	1,611	821	936	1,828	1,378	2,088	1,338	2,485	2,221
Württemberg-Unterland		1,225	1,292	1,433		959	1,217	754		1,175	1,497	979
Baden	694	620	573	734	723	642	874	892	452	400	503	513
Prussia etc.	37	27	67	67	955	936	1,173	892	30	26	32	157 ²⁾
Germany	23,637	20,289	22,408	24,493	923	727	1,177	1,003	18,330	14,800	23,971	22,144
Saaz	19,303	20,638	21,132	21,233	499	566	535	959	9,092	10,987	10,965	20,332
Auscha	3,044	3,450	3,469	3,479	865	830	932	968	2,645	2,535	3,218	3,372
Raudnitz	2,172	2,382	2,123	2,268	816	566	736	1,093	1,521	1,234	1,565	2,325
Dauba	255	356	469	371	865	1,048	1,084	651	220	330	386	242
Moravia etc.	591	670	717	729	561	410	1,066	736	308	242	716	529
Czechoslovakia	25,365	27,496	27,910	28,080	571	602	611	959	13,786	15,328	16,850	26,800
Alsace	3,323	3,546	3,516	3,533	753	1,378	1,075	807	2,479	4,694	3,780	2,843
Burgundy and Lorraine	813	840	808	754	672	945	843	245	540	771	683	187
Northern France . . .	447	556	618	593	1,614	1,574	1,284	892	639	705	716	529
France	4,583	4,942	4,942	4,880	793	1,342	1,048	727	3,658	6,170	5,179	3,559
Wolhynia	2,594	3,706	4,324	5,065	990	994	763	914	1,984	2,590	2,833	3,967
Congress Poland . . .	1,703	1,890	1,977	1,977	638	633	696	722	1,025	1,080	1,322	1,432
Galicia	855	996	890	865	321	348	433	508	275	298	386	441
Posen	284	445	494	494	76	776	446	892	22	220	198	441
Poland	5,436	7,037	7,685	8,401	606	771	673	816	3,306	4,188	4,739	6,281
Wojwodina	2,100	3,645	4,448	4,448	606	803	981	789	904	2,336	3,582	3,526
Slovenia	2,842	3,707	4,201	4,448	918	647	1,275	1,128	2,623	2,380	4,739	4,739
Jugoslavia	4,942	7,352	8,649	8,896	789	954	1,128	954	3,527	4,716	8,321	8,265
Russia³⁾	2,471	2,471	2,471	3,707	579	579	579	579	1,433	1,433	1,433	2,204
Alost	247	445	519	618	1,730	1,561	1,855	1,378	385	694	827	716
Poperinghe	1,161	1,332	1,549	1,260	1,449	1,516	1,654	874	1,433	1,763	2,204	1,102
Belgium	1,408	1,777	2,068	1,878	1,498	1,744	1,704	968	1,818	2,457	3,031	1,818
Various countries	370	741	741	988	600	600	600	600	220	440	440	584
Continent	68,212	72,105	76,874	81,323	731	722	887	932	46,078	49,538	63,964	71,655
Kent	9,366	10,009	10,142	10,106	1,523	1,747	1,613	1,669	14,246	17,539	16,386	16,890
Sussex	1,200	1,420	1,462	1,586	1,613	1,781	1,512	1,702	1,938	2,520	2,218	2,710
Hereford	3,805	4,016	3,998	3,994	1,232	1,277	1,333	1,266	4,693	5,118	5,331	5,040
Worcester	1,838	1,851	1,901	1,894	1,266	1,456	1,467	1,322	2,330	2,688	2,800	2,498
Hants, Surrey etc. . .	686	741	748	737	1,400	1,512	1,546	1,456	985	1,143	1,075	1,075
England	16,895	18,037	18,251	18,317	1,434	1,613	1,523	1,534	24,192	29,008	27,810	28,213
Europe	85,107	90,142	95,125	99,640	883	919	1,017	1,048	70,270	78,546	91,774	99,868
Washington	4,900	6,300	6,000	4,500	1,596	1,712	1,164	1,663	7,840	8,395	7,000	7,500
Oregon	19,000	23,000	26,000	21,600	1,133	1,026	977	482	21,565	19,550	22,500	10,400
California	6,400	7,500	6,900	5,400	1,650	1,753	1,405	1,258	10,560	11,250	9,700	6,800
United States of America	30,300	36,800	38,900	31,500	1,315	1,293	1,061	780	39,965	39,195	39,200	24,700
Canada	1,082	1,156	1,123	1,062	1,641	1,288	1,572	1,509	1,477	1,399	1,766	1,603
Australia and New Zealand	1,643	1,750	1,730	1,730	1,605	1,810	1,784	1,909	2,645	2,975	3,086	3,306
World's production	118,132	129,848	136,878	133,932	1,106	1,030	1,043	963	114,357	122,115	135,826	129,477

¹⁾ Preliminary.

²⁾ Including hops not receiving seal.

³⁾ Estimated.

In the **Hallertau** district about 80% of the crop was gathered in good quality and colour. About 3% remained unpicked. As compared with other years the picking and dryness of the **Hallertau** hops were very good; the percentage of lupulin was lower than in 1935.

The quality of the hops of the **Spalt** region gave general satisfaction. In some cases spraying against downy mildew was effected too late. As usual, the demand for the good **Spalt** hops was very lively.

In the district of **Tett nang** downy mildew was energetically combated in spite of the permanent wet weather. Although the plants were of a very luxuriant appearance in August, the important lower part had developed badly. The hops harvested differed in colour and picking, but came up to those of 1935 as to quality. In the district **Lake Constance in Baden** where 4/5 of late hops are grown, the product gave general satisfaction.

In **northern Baden** hop-fleas, lice and red spider had to be fought in addition to downy mildew. A careful picking and drying had to be noticed whilst the product itself was not uniform. The good qualities were soon sold.

In **Wurttemberg Unterland** (Rottenburg, Herrenberg, Weilderstadt) downy mildew and lice appeared persistently. Hardly half the crop was gathered in a reproachless condition and this was in strong demand on account of its good appearance and the favourable content of lupulin.

The regions of **Hersbrucker Gebirge, Aischgrund, Jura and Rheinpfalz** suffered from an abundance of humidity and downy mildew, hop-fleas and lice. The general condition of the plants was very different. The carefully trained fields yielded well.

Quality was judged as follows:	prime	medium	inferior
	p. c.	p. c.	p. c.
Hallertau	35	45	20
Spalt	25	45	30
Tett nang	30	55	15
Wurttemberg Unterland	30	45	25
Northern Baden	15	50	35
Hersbrucker Gebirge	15	40	45

	German Hop Imports.	German Hop Exports.
Oct. 1st, 1934 to Sept. 30th, 1935	5,974,603 lbs.	6,177,371 lbs.
Oct. 1st, 1935 to Sept. 30th, 1936	6,078,412 „	8,189,403 „
Oct. 1st, 1936 to March 31st, 1937	5,019,610 „	6,237,761 „

Prices of the German Crop 1936.

Producers' prices of the 1936 crop were fixed at RM. 200—300 for the regions of **Spalt, Tett nang, Hallertau and Jura** and at RM. 170—300 per 50 kilos for the remaining hop growing districts of Germany. The prices of unsealed hops and of inferior or damaged qualities were considerably lower.

In the **Hallertau** district prices moved between RM. 200 and RM. 240 during September, and in some cases RM. 260 were paid. Early in October 85 to 90 p.c. were considered as sold.

The regions of **Tett nang** and **Spalt** were able to sell their best hops at maximum prices at the beginning of the season. In **Tett nang** RM. 250—280 were paid at the beginning, and RM. 200—250 later on, in the district of **Spalt** RM. 270—300, later RM. 200—280. In the **Wurttemberg Unterland** the prices amounted to RM. 170—210, in **Baden** to RM. 170—250, in the **Jura** district to RM. 200—300 and in the **Hersbrucker Gebirge** to RM. 170—200.

Since the

Immediately after picking a **strong demand** set in from many countries abroad, especially from the **United States of North America**, so that the quantities ready for export were soon exhausted. A total quantity of 5,180,000 lbs. of 1936 German hops has been exported.

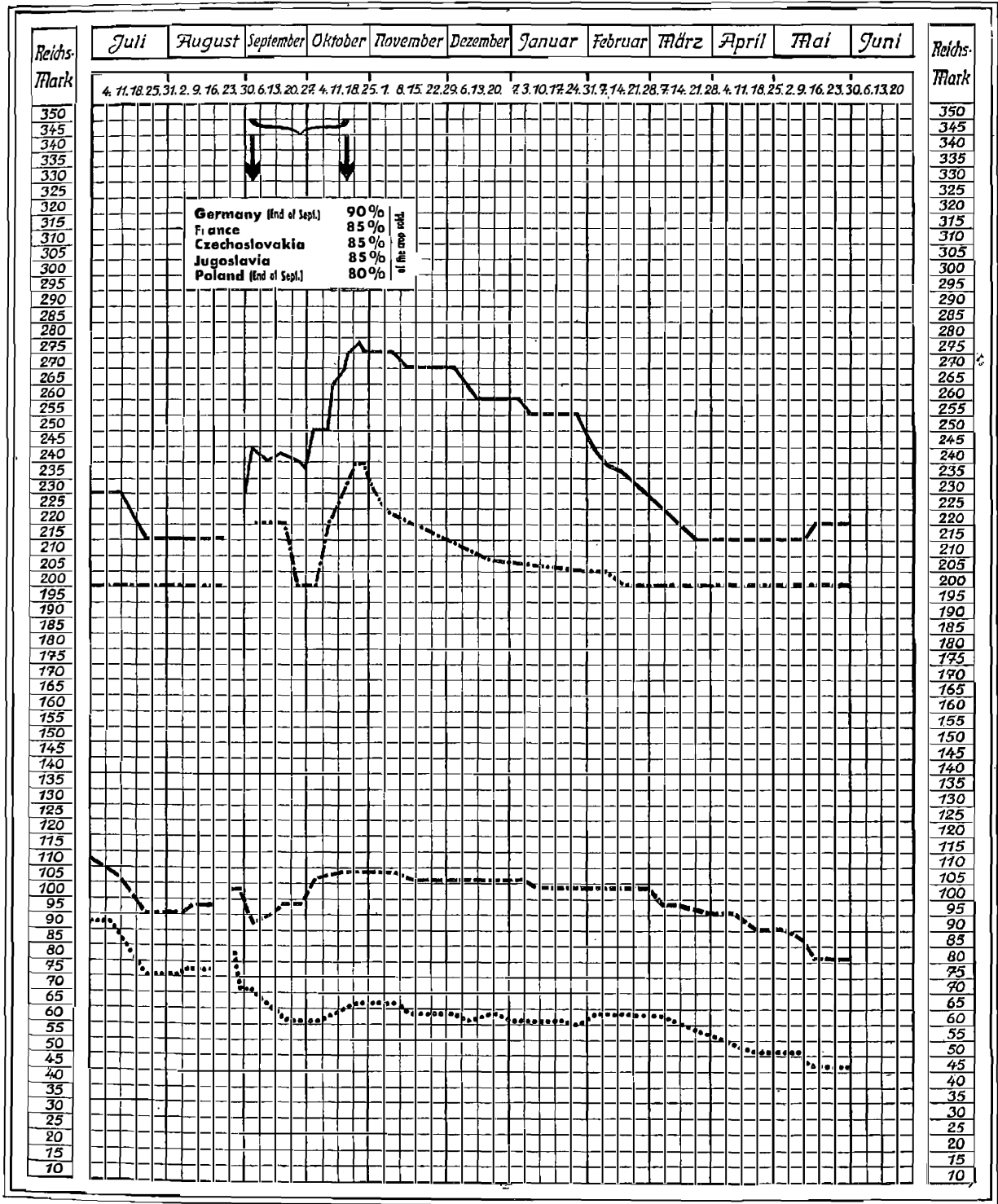
In all foreign countries the best German hops have been paid with higher prices than for hops of any other origin with few exceptions of **Saaz** hops, in which fact everybody will be able to recognize the demand for the **high brewing value** of the German hops acknowledged throughout the world's brewing industry.

The German hop acreage has been regulated by a decree of the Association of the German Brewing Industry (HVdB. = Haupt-Vereinigung der deutschen Brauwirtschaft) on February 23rd, 1937. This regulation met with general interest, as it provides for a reduction of the acreage with the intention of furthering the cultivation of hops of quality.

The remunerative prices secured to the German hop producers since the 1933 crop, have brought about an extraordinary increase of the yield. In 1929 the average yield per acre over a

period of ten years was 560 lbs., whilst in the past years it amounts to more than 890 lbs. As a consequence German exports increased, but, especially as regards the inferior qualities, they have to compete abroad with the unprofitable prices of Polish, Jugoslavish and French hops. The rapid enlargement of the acreage in Poland (1932=4875 acres, 1936=8400 acres) and in Jugoslavia (1932=4450 acres, 1936=8900 acres) forces these countries to export nearly the whole crops at any price. It follows that the growers as a rule only receive a part of the cost of production for their medium and inferior qualities.

Movement of Prices 1936/37.



————— Hallertau choice quality ——— Saaz choice quality } per cwt.
 - - - - - " fair average quality " fair average quality }
 RM. 100 = \$ 40 (June 1937).

The German regulation provides for a general reduction of the acreage of 1936 by 3700 acres in such a manner that those districts where inferior qualities are produced, have to decrease a

higher percentage of the acreage. All gardens outside the recognized growing districts must be removed by December 1st, 1937. The small gardens below 1,25 acres and in certain districts secluded plantations consisting of poles have to be ploughed out, as well as all fields cultivated without permission. In the district of Tettwang the ploughing out of the sort "Striesselpalt" which is regarded as inferior, had to be done by April 30th, 1937. Arrangements have also been made for depriving negligent hop growers of the right of cultivation in case they train their fields badly or do not fight the pests which then become dangerous to neighbouring gardens. The keeping up, the laying out and the enlargement of fields are subject to official permission. A premium of RM. 405 per acre was conceded for ploughing out voluntarily and fields admitted heretofore.

The measurement of the hop gardens owned by about 27.000 German producers has not yet been finished so that the final figures of the changed acreage will become known somewhat later. The latter will be adapted to the requirements of the German breweries, whilst sufficient quantities of quality hops will be available for export purposes from normal crops. For the 1937 crop there will be an acreage of 21.750 acres.

**Bitter Principle
of the 1936 Crop.**

Although the weather was especially wet during the growth of the German 1936 hops, the analysis made according to the Wöllmer method by the Staatliche Brautechnische Versuchstation at Weihenstephan and by the Wissenschaftliche Station in Munich have not resulted in large differences between the portion of the soft resins as compared with hops of the 1935 crop. The fraction of soft resins has again been found to be abundant in every respect showing more or less humulon and lupulon respectively according to the origin of hops. Generally speaking the German 1936 hops represented very good qualities as regards both the bitter principle and the antiseptic power.

The results achieved by the above mentioned analysis for soft resins of the German 1936 hops are as follows, and the respective figures for the years 1932 to 1935 are also given:

Origin	1932	1933	1934	1935	1936
	Soft resins without water	Soft resins without water	Soft resins without water	Soft resins without water	Soft resins without water
	%	%	%	%	%
Hallertau	15,9—18,9	14,2—16,9	11,9—15,6	15,6—18,6	14,0—18,1
Spalt	15,3—18,5	13,0—16,1	13,0—16,0	15,1—17,4	15,1—19,2
Hersbrucker Gebirge	15,3—18,2	11,5—16,8	12,1—15,6	14,4—18,0	15,7—16,8
Wurttemberg	15,4—20,5	13,4—17,7	14,0—16,4	14,1—18,5	13,6—19,4
Baden	—	15,6—16,2	12,3—12,8	13,3—17,1	19,4
Saaz	14,2—16,8	12,7—14,1	12,2—15,4	13,5—16,8	10,8—15,3
Auscha	13,1—16,7	13,7—15,8	11,5—12,5	14,1—16,3	12,8—17,1
Alsace	16,5	12,9	13,4—14,4	16,1	17,3—18,5
Styria	13,5—15,3	12,1—13,2	14,1	14,4—16,8	13,3—15,7
Backa	14,5—16,7	15,7—16,4	14,9	14,8—17,6	17,4
Poland	13,2—15,5	12,4—13,7	11,3—12,7	15,1—15,4	13,2

The Wissenschaftliche Station in Munich states that in their opinion the valuation of hops only according to the percentage of bitter principle is apt to lead to wrong conclusions, if one does not take into consideration a number of other qualities important to the brewer of which the aroma comes first. Therefore, when examining hops, it should be made a condition to carry out a chemical analysis as well as an examination by hand. It is on the result of both tests that the final judgement is based.

**1936 Crop in
Central Europe.**

Looking back to the 1936 crop of Central Europe, we come to the following conclusions:

1. Instead of the drought which prevailed during the growth of the year 1935, there was an abundance of rain in 1936. The hops had in general cones of normal size, but a lower percentage of lupulin; they yielded less therefore than in the preceding year.

2. The renewed strong appearance of downy mildew in the hitherto less attacked hop growing countries such as Czechoslovakia, Jugoslavia, Poland and the Pacific Coast of U.S.A., teaches the dire necessity of regular spraying. Especially heavy damage has been done to those classes of hops which up to the present were regarded as less susceptible. Owing to the latter fact the producers were not prepared to combat effectively in time, or else the signs of the disease were recognized too late.

3. Nearly the whole of the surplus stocks of the Central European hop-growing countries was taken up by U.S.A., for that country had an especially small crop in 1936 and was obliged to import more, owing to the increasing beer-consumption. Without this increased demand, the drop in prices menacing Continental Europe owing to too large acreage, would have been more

conspicuous in 1936. Germany made due allowance for this threatening situation by a reliable regulation of her hop-acreage which was reduced by 15%. In other countries with export surplus the sad experience and the enormous loss sustained by the hop-growers during the disastrous years 1929 to 1931, have apparently fallen into oblivion.

Saaz: The plant survived well the winter. The month of May was mostly warm with plenty of rain so that by the end of the month the strong plant had reached a height of one to two meters. The first half of June had wet weather with low temperature whilst the second half was warm. At the middle of July the hops had developed luxuriantly; they had attained full height and overhung the poles. The heavy rain which fell almost daily at that time retarded the development of the cones as the bloom was in a poor state.

Czechoslovakia.

With regard to pests, hop-fleas appeared as usual, whilst snout-beetle was largely noticed during the first growth. Aphis and lice strongly appeared in June especially in the low lying regions, and they were successfully combated. Downy mildew appeared about the middle of July in various parts. The disease was prevented from spreading by the dry weather setting in before the beginning of the picking. Spraying was effected once or twice, mostly only a short time before the harvest.

Two heavy thunderstorms on July 27th and August 19th caused considerable damage by knocking down about 3.600.000 and 600.000 plants respectively.

There was also plenty of rain during the first half of August. The total fall was extraordinarily large; at Saaz during the time of January to end of August 1936 it figures out at 413,9 mm (1935: 194,6 mm; 1934: 292,6 mm; 1933: 222,2 mm); alone in July 1936 which was particularly wet, the rainfall was 128,3 mm.

The harvest in some parts began on August 21st, but generally on August 25th and on account of the rich yield it lasted longer than usual, i. e. to September 12th. It was mostly favoured by excellent weather with the exception of the last days. The quantity harvested was nearly twice as large as that one of 1935. In other words the abundance of rain which fell after three unusually dry years, has proved to be of advantage, which is reflected by the high average yield of about 935 lbs. per acre. The 1936 crop was of a somewhat lighter quality and there were larger differences in colour than in the preceding year. The cones were of middle size. About 660.000 lbs. remained unpicked.

Owing to the rich yield the growers were much inclined to sell at the beginning of the crop. Unusually brisk buying was general owing to the demand being more lively than in other years and also as a consequence of large requirements from U.S.A.

The prices were influenced by the depreciation of the czechoslovakian currency at the beginning of October. The first quotations were Kc. 1000. At the end of August prices ranged between Kc. 800 and Kc. 1000 and had given way to Kc. 550 to 950 by the middle of September. They reached their highest level of Kc. 750 to 1225 at about middle of October upon which, apart from slight alterations, they remained until the close of the year. At the end of April 1937 the free stocks amounted to about 548.800 lbs., the range of prices being Kc. 600 to 1050, and later Kc. 500 to 900.

Auscha: The changeable and rainy weather was very favourable to the growth of the plant which developed very luxuriantly. Hop-fleas and lice were fought with success. Downy mildew was traced in some parts during the first days of July. Competent quarters pointed out the danger, but the warning was not heeded, because the growers had too little experience for the early recognition of the symptoms of the disease. Spraying was effected once in the valleys and on the "Platte" and twice in the higher situated regions, but in many cases too late. The general condition of the plants at the beginning of August was such as to warrant the best hopes for an excellent crop both in quality and quantity. However, at about the middle of August a strong discolouring of the cones was suddenly noticed in the valleys and on the "Platte" during the last period of the cones' development; this discolouring was favoured by warm and wet weather. It was still possible to spray with success the gardens which were less affected.

The rainfall during January to August 1936 figures out at 491 mm. The picking began on August 20th and lasted to September 15th during favourable weather with the exception of the last days. About 10% remained unpicked. The colour of the hops suffered from downy mildew, the quality was somewhat lighter than in 1935. The cones were of middle size. In many regions a great part of the hops was picked before maturity for fear of discolouring. Full ripeness was only attained in those districts that have been spared from downy mildew.

The remains of 1935 hops were sold at the beginning of August at Kc. 275—375.

The prices of the new hops commenced with Kc. 500—600 and at the end of August ranged between Kc. 400 and 625, whilst after the first week of September Kc. 350—650 were

quoted. At first principally the best sorts were demanded, but as from the middle of September inferior quality was also asked for. At the end of that month prices ranged between Kc. 275 and 650 and nearly half of the Auscha crop was then taken from producers' hands. As a consequence of the depreciated czechoslovakian currency at the beginning of October prices rose in general, principally for spotted hops which gained Kc. 100. At the end of December prices ranged between Kc. 325 and 725. At the end of April 1937 prices ranged between Kc. 400 and Kc. 650 for the remainings of about 44.100 lbs.

Raudnitz: The percentage of hops of a green colour was larger than in the district of Auscha, but generally the colour of the product remained considerably behind that one of 1935. The harvest was brought in within a shorter time than at Auscha, namely between August 18th and September 7th whereby many hops were saved from discolouring. Spraying against downy mildew was effected one to three times. The quality was particularly satisfactory in the higher situated regions, whereas in the lower parts many hops had been picked too early. In spite of unemployment there was a shortage of pickers. About 10% of the crop remained unpicked.

Although the average prices for Raudnitz hops were Kc. 50 above those of Auscha hops, the demand for the former was greater and at the end of the year only about 11.200 lbs. were left with the producers.

Dauba: In that district the cones were red-coloured to a large degree so that hops of a green colour were scarce. The commencing price of Kc. 350 rose to Kc. 550 at the end of September and a month later prices ranged between Kc. 325 and 400. In November there were many buyers for inferior quality at Kc. 250—275. About 12% remained unpicked.

Moravia: The total yield of about 397.000 lbs. was picked. The crop suffered from downy mildew owing to spraying having been omitted. Prices moved between Kc. 350 and 550.

The "Reichsberatungsausschuß" has recommended to the Ministry of Agriculture not to admit enlargements for 1937. It has proved of necessity to exert a severer control of the extent of the hop acreage and with this purpose in mind the government has decreed the obligatory registration of the acreage.

The plan for the regulation of the sale of the hops for inland purposes is said still to exist. On the other hand one has come to the conviction that Czechoslovakia is largely dependent upon the exportation of hops. Therefore the latter must be adapted to the world market and is best left out from any regulation.

Quality was judged:	prime	medium	inferior
	p. c.	p. c.	p. c.
Saaz	35	40	25
Auscha	10	20	70
Raudnitz	15	30	55
Dauba	5	40	55
Moravia	25	50	25

Czechoslovakian Exports.

Sept. 1st, 1934 to August 31st, 1935	11.899.065 lbs.
Sept. 1st, 1935 to August 31st, 1936	11.650.344 lbs.
Sept. 1st, 1936 to March 31st, 1937	17.871.134 lbs.

Slovenia: After a mild winter with little snow the uncovering of the plants began at the end of March during warm weather. April was changeable with rain and snow in the higher parts. The second half of the month was remarkable for dryness, whilst May was mostly humid and cool. The state of the plants not being uniform, the growth only slowly developed. Mostly wet and cool weather continued until the middle of June and was followed by sunshine and warmer days which were very favourable to the plant. The latter reached full height of the trellises at the end of June; it had many lateral branches and was in full bloom at the middle of July. Only the external regions suffered from hail. The warm weather in July with refreshing rains furthered the development of the plant and transformed the burr into cones.

Hop-fleas which appeared numerously, did no lasting damage; likewise lice principally noticed in higher regions remained harmless.

As a consequence of propaganda by competent quarters downy mildew was combated for the first time as early as end of May in about 60 to 70 p. c. of the gardens; spraying was effected four to five times on an average. This pest made also its first strong appearance in higher regions. There were discolourings in neglected fields.

In some gardens where no washing had been done, picking began too early on about August 6th for fear of discolourings, whilst the general harvest commenced on August 16th

lasting to the end of the month with favourable weather. **Colour and quality** were as good as in the preceding year. The acreage was increased by about 250 acres as compared with 1935. The yield totalled about the same quantity as past year. One expects a further increase of the acreage by about 5 p. c. for 1937.

Buying up, mostly on behalf of English and North American account, took place extremely rapidly. In the second half of October stocks in producers' hands were estimated at below 112.000 lbs. At the end of November the remains amounted only to about 44.800 lbs.

The commencing price of 1250 Dinars per 50 kilos for prime quality remained on about that level for several weeks and had risen to 1700 Dinars by the beginning of November. Inferior quality was bought at 500 to 750 Dinars.

Quality was judged: prime 40 p. c. medium 40 p. c. inferior 20 p. c.

Wojwodina: After a mostly dry spring there was much rain in the principal hop-growing districts about middle of May. At the beginning of the subsequent month **lice** were hardly present, but signs of **downy mildew** could be traced. This disease generally not recognised in time, was only fought by a few producers. Great heat towards middle of July prevented its spreading, although it did not disappear altogether. Rain at the end of July was favourable to the development of the plant so that at about middle of August the gardens made a good appearance and general hopes for a good yield were entertained. Within a few days however these hopes were disappointed by the sudden appearance of intense discolourings. At the same time downy mildew continued to spread as a consequence of misty weather. Hops of a clean green colour were rare, the majority was of a more or less bad colour. **Picking** started a week later than in the preceding year, namely on August 25th, and finished on about September 10th during good weather. In some parts there was a shortage of pickers. About 10% remained unpicked. The acreage equaled that of 1935. An increase of about 4% is expected for 1937.

The opening price of 750 Dinars per 50 kilos for prime quality rapidly rose to 900 Dinars whilst medium hops cost 500 to 600 Dinars. The highest price of 700 to 1200 Dinars was paid at the end of September. In the second half of November when the stocks were nearly exhausted, prices were between 400 and 1000 Dinars.

Quality was judged as follows: prime 10 p. c. medium 60 p. c. inferior 30 p. c.

	Jugoslavian Exports.
September 1 st, 1934 to August 31 st, 1935	4.568.892 lbs.
September 1 st, 1935 to August 31 st, 1936	7.771.304 lbs.
September 1 st, 1936 to March 31 st, 1937	7.533.272 lbs.

After a mild winter the plant when uncovered in spring proved to be healthy. The first growth, retarded by cool nights in May, was slow. There were regions where the weather was too dry at the time when the plant had reached an advanced stage of development, for there was only a slight rainfall in June and July which even was not general. During the growth **hopfleas** appeared numerously and also **lice** in some parts. The heat prevailing at the end of July and at the beginning of August resulted in an attack of **red spider**. Abundant rain followed which prevented this dangerous vermin from spreading, but caused heavy **damages** by **downy mildew** on the other side.

Poland.

The **beginning of the picking** differed in the extended regions of the country, especially as full ripeness could not be waited for in some places. The harvesting started in the first days of August, in Great Poland only at the end of the month. The picking ended during the second half of September, but mostly about the middle of that month. It was **hindered by cool weather as well as much rain and storms**. **Downy mildew** which frequently has been present, developed as a consequence of the wet weather and resulted in heavy discolourings. Although the fight against this disease continued to progress, it has not generally been effected. Spraying was done two or three times in about 25% of the gardens.

Wolhynia: The colour of the plant was mostly inferior to that of the preceding year, whilst the quality was better than in 1935. The condition of the cones was normal. The total yield was considerably higher than the past year. The acreage was increased from 1935 to 1936 by about 12%. The substitution of new fields for old ones is being continued so that a further increase of the yield can be expected. A further enlargement of the acreage is being considered for 1937.

In **Congress Poland** the development of the plant was normal until August although rain was missing at times, but then rain and downy mildew brought damage. About 75% of the gardens are reported to have been sprayed, the well-cultured ones about four times. The colour of a large part of the plants has suffered. 5% of the crop were not picked. The acreage has hardly changed.

Poland.

In **Galicia** the majority of the crop gave but little satisfaction. About 10% remained unpicked on account of the red colour of the cones and a further considerable percentage was not mature. Diligent producers sprayed three to four times against downy mildew.

Posen: The yield is estimated at roughly 441,000 lbs. of which about 7% remained unpicked. The quality of the plant did not come up to that of the preceding year. The acreage was slightly increased.

Prices: Buying was as brisk and as rapidly completed as in other countries. All sorts of hops derived profit from the upward tendency of the prices. The commencing price for prime quality rose from 100 Zloty to 155 Zloty and to more in some cases. For good medium 70 to 100 Zloty were paid, for weak medium 40 to 70 Zloty and for inferior 35 to 50 Zloty.

Quality was judged:	prime	medium	inferior
	p. c.	p. c.	p. c.
Wolhynia	25	50	25
Congress Poland	35	40	25
Little Poland	20	30	50
Posen	10	60	30

The **cost of production** is stated to be 40 to 90 Zloty according to the respective district. A figure of 40 to 45 Zloty for the cost of production without amortization has been reported. According to information received pickers' wages amount to 25 Zloty per 50 kilos of dry hops.

The **hop crop 1936** involved a loss for agriculture, for the proportion of prime qualities was too small whilst the proceeds from medium and inferior sorts often did not cover the modest cost of production.

As in former years, owing to their international valuation of the qualities, Polish hops were mostly sold at reduced prices for production of high-fermenting beers.

The **Polish acreage** was reduced from 9500 acres in 1928 to about 4950 acres in 1931 and 1932. Since then a continuous increase has taken place which, amounting to 8400 acres in 1936, has not yet come to a standstill. With the exception of roughly 606,000 lbs. required for home consumption and for Dantzig, the production is dependend upon exportation. The prices realizable for Polish hops on the world market are mostly on the lowest level of the international price range. This is due to the fact that for years the quality of the crop has been suffering from insufficient cultivation during the growth, from inadequately fighting the diseases and from a frequently faulty treatment after picking.

We read that the drawbacks described have been recognized in Poland and that endeavours are being made with a view to removing by means of organisation and measures of reform and obligation, the deficiencies hitherto existing. The future will show whether the producer can be persuaded of the necessity of growing quality hops and reducing the acreage.

	Imports into Poland.	Exports from Poland.
Sept. 1st, 1934 to August 31st, 1935	15,868 lbs.	3,831,213 lbs.
Sept. 1st, 1935 to August 31st, 1936	18,514 lbs.	4,425,632 lbs.
Sept. 1st, 1936 to March 31st, 1937	21,158 lbs.	6,087,448 lbs.

France.

Alsace: From the beginning of March to the end of May the generally warm weather was favourable to the development of the plant. There was extraordinary much rain during the subsequent months, especially from the middle of July to the middle of August, and this as well as cool nights were anything but useful to the hops. Lice appeared numerously at the beginning of June, but they were destroyed in the course of the month by two washings with nicotine fluid. Against downy mildew spraying was effected six times on an average. This disease, for a long time hardly noticeable, largely spread about middle of August thus resulting in discolourings to a large extent within a few days.

Picking began on August 31st during good weather and lasted until September 23rd. During the second half of the harvest rainy weather prevailed. About 10% remained unpicked. The yield, both in quality and quantity, was much behind that one of the preceding year.

The acreage remained about the same as in 1935. Buying was brisk and particularly the hops of good colour were soon sold out. At about the end of November only small quantities were left in producers' hands. The cost of production of a normal crop is estimated at about ffrs. 500 per 50 kilos.

The development of the prices was influenced by the depreciation of the French currency. The commencing price of ffrs. 350 rose to ffrs. 650. Ffrs. 300 to 400 were paid for inferior grade hops. The producers are not satisfied with the financial result of the 1936 crop.

Nord: As a consequence of **downy mildew** the whole yield was lost in neglected gardens. Half of the harvest however was of a quality superior to that of 1935. Spraying was effected from three to four times. The bringing in of the hops was partly hindered by storms and rain. About 5% of the gardens were not picked.

France.

Prices set in with ffrs. 300, fell to ffrs. 250, then rose to ffrs. 450 and later dropped again. Owing to these unremunerative prices some producers abandoned hop growing in the spring 1937. At that time the interparliamentary group of hop defence has claimed from the Ministry of Agriculture the increase of the import-duty on hops, the payment of premiums on hop-growing in France as well as on exports, and finally the compulsory use of domestic hops prior to granting import licences.

In **Burgundy** (Côte d'Or) the crop suffered greatly from storms and hail in August.

Competent producers' quarters designate the 1936 crop as one of the weakest of France. It amounts to about 3,640,000 lbs. upon about 4950 acres equal to an average yield per acre of 727 lbs., namely 892 lbs. in Flanders (Nord), 807 lbs. in Alsace, 245 lbs. in Lorraine and in Burgundy. The average prices varied between ffrs. 300 and ffrs. 500. Whilst the average outlay per acre amounted to ffrs. 4850, the average receipt came to ffrs. 2590 so that one calculated a total loss of more than 10 million francs resulting from this crop for the French hop growers.

Quality was judged:	prime	medium	inferior
	p. c.	p. c.	p. c.
Alsace	20	50	30
Nord	15	60	25
	French Imports.		French Exports.
1934	2,951,376 lbs.		3,034,026 lbs.
1935	2,488,977 "		1,740,278 "
1936	2,801,504 "		1,072,687 "

The winter was mild and humid; May and June were mostly dry; there was much rain in July, the month of August was rather dry. **Vermin** appeared numerously from the middle of May till the middle of June whilst **downy mildew** was also noticed. Spraying was done four to five times on an average, in some rare cases ten to fifteen times. A few growers did not spray at all, some started too late, in some cases not before the time of blooming.

Belgium.

Picking at **Poperinghe** started at the end of August and was finished about middle of September. It was hindered by storm and rain as well as mist at night. The quantity harvested, also as a consequence of the spreading of downy mildew in July, remained behind that one of 1935 by 50%, but the colour of the hops was considerably better; the quality was the same as in the preceding year. The acreage was largely reduced in 1936 and it is very likely to be diminished further in 1937. About 3% of the crop remained unpicked.

At **Alost** the picking in some parts began as early as August 23rd and lasted until the end of September. The quantity was a little smaller than that of 1935. The colour was good in general with the exception of the hops damaged by downy mildew. The quality of about half of the crop was considerably better than in the past year. The acreage was increased from 1935 to 1936 by about 100 acres and a further enlargement is to be expected for 1937.

Prices at Poperinghe set in with bfrs. 350 to 375 for "Buvrannes", slowly rose to bfrs. 700 and later dropped again a little. The prices of the favourite Tettang seedlings of which for the time being only about 3300 lbs. are grown, moved between bfrs. 800 and bfrs. 900. At **Alost** prices ranged from bfrs. 600 to 850 for the sorts "Cagneaux" and "Groene Bel", according to the condition of the hops and the yield, whilst Hallertau seedlings were cleared within a few days at bfrs. 700 to 950. The cost of production of hop-growing in Belgium amounted to bfrs. 300 to 450 per 50 kilos. At the beginning of June bfrs. 575 were paid for 1937 hops.

Quality was judged:	prime	medium	inferior
	p. c.	p. c.	p. c.
Poperinghe	25	60	15
Alost	25	50	25

In Belgium an improvement of the product is aimed at, especially by increasing the popular sorts such as Tettang and Hallertau seedlings.

	Belgian Imports.	Belgian Exports.
1934	5,450,492 lbs.	1,281,405 lbs.
1935	4,476,324 "	841,707 "
1936	5,803,793 "	1,034,998 "

As the result of a cold and wet spring the plant was **backward until the middle of June**. The later half of June provided favourable growing weather. The **bad attack of fly** was very persistent in most districts and had to be held in check by washing and powdering until August.

England.

England.

From beginning of July until about middle of August another wet period followed accompanied by excessive rains and cold winds, by thunder and hail-storms and cold nights which at the beginning of August nearly brought the development of the plants to a standstill. Many grounds were too wet for cultivation. The wet-weather disease, downy mildew, was assuming serious proportions and washing was done generally four times.

Sunny and dry weather followed in the second half of August and quickly changed the burr into hops and favoured the crop both in development and condition.

Picking started about the 7th of September and lasted till the end of the first week of October in the South, and until the middle of October in the Midlands; it took five instead of the customary three weeks on account of a shortage of pickers and wet weather. During picking high winds came up and partly stained the colour of the hops. 1122 acres were left unpicked as compared with 632 acres in 1935.

The excess of humidity made the crop an expensive one for the elevated outlay not only for cultivation and combating of diseases and pests, but also for the higher cost of harvesting which is estimated at 30% to 50% above that one of previous years.

"Fuggles" which make out about 75 per cent of the entire crop yielded well, whilst "Goldings" and "Golding varieties" were affected by downy mildew. The cones were generally smaller than usual and not so ripe as average. Many hops showed traces of mould. The best districts were the Weald and East Kent.

The antiseptic power of the crop was considered superior to that one of 1935, but the aroma, quality and colour were lower in comparison with the last years. The range in quality and brewing value was exceptionally wide.

Quality was judged: prime 25 p. c. medium 50 p. c. inferior 25 p. c.

The prices ranged from £ 4 to £ 13. The discolouring of the hops during picking was attributed to the continued absence of sun, prevalence of low temperature, adverse weather, gales and overexposure of the hops. The hardier "Fuggles" seem to have surmounted the adverse climatic conditions better than the other varieties.

Transfers of quotas could be effected up to October 15th. Growers generally have produced in excess of their quota although they were advised only to pick the best hops. Many of them in order to arrive at their quota had later to pick their entire crop irrespective of quality which is one of the disadvantages of the scheme.

At the end of October the samples were given over to the trade (one out of 10 bales) and valuation proceeding by three committees officially started on the 5th of November and took again three months. The wide diversity in the quality and colour of the crop rendered the task of the valuers difficult. On special permit early deliveries were granted for freshening up old stocks. Business in the new crop began on January 6th, 1937. The weighing of the crop was completed end of February or four and a half months after end of picking.

533 brewers contracted for the 1936 crop for a total of 187.334 cwt. or 20.981.000 lbs. or 83 per cent of the estimated market demand of 225.000 cwt. or 25.200.000 lbs.; this quantity is considerably in excess of the minimum of 66²/₃ per cent fixed in the scheme.

The Hops Marketing Board (H. M. B.) reports that 148.677 pockets (of about 172 lbs.) or 229.030 cwt. have been consigned from the growers as compared with 148.987 pockets or 3.300 cwt. more than last season. Together with the hops grown by brewers and the registered contracts 252.000 cwt. or 28.200.000 lbs. have been harvested as against 248.300 cwt. or 27.800.000 lbs. in 1935.

The delay in getting the crop into their hands is again complained of by brewers who would prefer the adoption of a modified bidding system. The H. M. B. reports that the enquiries in the use of artificial light to shorten the time taken to value the crop have been fruitless. It has promised to consider whether an improved system of valuation can be adopted to expedite the release of the crop. The sale of basic quotas is reported to have caused difficulties and that by this method grave danger is arising of best quality hops becoming scarcer from year to year. The present quota provisions cease to apply with the crop of the year 1938.

The drawing of samples, two to three months before they are valued which naturally causes the samples to fade and to lose their appearance and real value, has proved too early.

The quantity unsold of 1936 hops in the hands of the H. M. B. was estimated at end of April 1937 at 12.000 cwt. or 1.344.000 lbs. The balance of the 1935 crop of about 6000 cwt. or 672.000 lbs. as well as that one of 1934 hops has been disposed of for manurial purposes.

In April a continuous demand for old hops came up and considerable quantities of the crops 1927 to 1934 have been sold at satisfactory prices.

The import duty of £ 4 per cwt. on foreign hops has been renewed until August 1941. England.

	English Imports.	English Exports.
Sept. 1st, 1934 to August 31st, 1935 . . .	38.577 cwt.	16.957 cwt.
Sept. 1st, 1935 to August 31st, 1936 . . .	44.744 „	15.000 „
Sept. 1st, 1936 to April 30th 1937 . . .	33.596 „	12.045 „

Washington: The Yakima district had a colder winter than for several years and cultivation started late. Real hot weather came as usual during the summer months and dried up the downy mildew. Spraying was done both for lice and red spider with an average of two to four times. Downy mildew was not combated. In the Tampico Section and Lower Valley more damage was done by lice and honeydew, whilst the Moxee and Mabton sections in the Yakima valley were badly hit by red spider. Prolonged rains early in the season joined with a heavy attack of downy mildew and lice in the Puyallup Valley, where till August 31st a rainfall of about 15 inches was stated against 1 inch in the Yakima district. 1 inch = 25.4 millimeters. U.S.A.

Picking was rushed in the last days of August to prevent more damage from red spider; later picking showed improved quality. The cones were large, often not fully ripe, the colour was greener, the quality, flavour and picking slightly inferior compared to 1935.

On account of the low prices of 5—9 c for 1935 hops and of 12—13 c for contracts which were paid in spring 1936 and are considerably below cost, only about 4400 acres remained in production, the other part being ploughed out or not worked. The crop yielded 37.500 bales as against 35.000 bales in the preceding year.

Oregon: An exceptionally long wet season until June caused considerable damages by downy mildew and vermin. As prices in spring 1936 were very low, growers did not make any efforts to fight diseases and insects and in consequence many hops were lost. Rainfall between September 1935 and July 1936 was 36.74 inches. Early and late Clusters were particularly injured; Fuggles yielded about 50 p. c. less than in the previous year; July and August brought a much more favourable weather and improved the crop conditions. About 19.500 acres were worked as against 26.000 acres in the year before. Quite many hops were harvested on unworked yards. Picking lasted till September 20th and suffered by shortage of pickers. Both Fuggles and Clusters showed a wide range in quality, the cones were smaller, often immature, the colour was poor and the picking dirty. The yield was 52.000 bales as against 112.500 bales in 1935.

California: During the spring of 1936 until end of June there fell more rain than usual. The rainfall between January 1st and July 31st was about 16.36 inches in Sacramento, 27.53 inches in Sonoma and even 30.20 inches in Mendocino. The wet weather caused heavy damages of downy mildew in Sonoma and Mendocino, all early trained yards were badly infested; the attack was the worst ever experienced in these two districts. On account of the cool and damp weather lice appeared also. The usual hot weather in July and August greatly helped the crop. The Sacramento section was not affected to any extent by downy mildew or lice, but suffered in the American river district from red spider.

No systematic system for spraying was used in California with very few exceptions; picking of the spikes alone will never be able, in our opinion, to stop the development of downy mildew if dry and hot weather does not come to help.

Picking began August 3rd in the upper Sacramento Valley, August 10th in Sonoma and Mendocino and was completed about October 1st; the bulk of the crop was picked between August 25th and September 20th. Harvesting was delayed by shortage of pickers in Mendocino. Excellent weather lasted throughout the harvest.

Cones of the Californian hops were smaller in general. Colour and quality were often better than in 1935 with the exception of the crop in Sonoma which was worse.

5300 acres were worked, about 1300 acres remained out of production. The crop yielded 9000 bales in Sonoma, 6000 in Mendocino and Lake county and 19.000 bales in Sacramento, or about 34.000 bales in California against 48.500 in the year before. The acreage for 1937 is estimated to amount to about 6800 acres.

Quality was judged:	prime	medium	inferior
	p. c.	p. c.	p. c.
Washington	25	50	25
Oregon	30	50	20
California	65	30	5

The crop of the three Pacific Coast States together amounted to 123.500 bales equal to 24.700.000 lbs. It was about 37% smaller than the crop 1935 which yielded 196.000 bales or 39.200.000 lbs. On August 31st, 1936 the stocks in growers' hands were estimated by the

trade at about **80.000 bales** consisting of 8900 bales crop 1935, 31.600 bales crop 1934 and about 40.000 bales 1933 and older hops.

Increasing cost of production.

On account of the shortage of labour for harvest and lack of finances the quality suffered as to picking and was often not as clean as **brewers desire**, who prefer **cleanly picked and seedless hops which are more expensive to produce**. Picking cost increased from \$ 1.50 per cwt. green weight to \$ 2, and towards the end of the picking season as much as \$ 3 had to be paid.

The green hops dried out **lighter than usual**. In ordinary years 100 pounds of green hops weigh out 26 to 28 lbs., in 1936 only 22 to 24 lbs. Therefore bales which normally average 200 lbs. were often running from 185 to 190 lbs. At a request of the research committee of the Hop Growers' Association of the State of Oregon where two thirds of all U.S.A. hops are grown, a study of the **cost of producing the crops of the years 1934 and 1935** has been made by the **Oregon Agricultural Experiment Station** and will be continued for 1936.

The data obtained from 24 established yards indicate an average cost of 15,3 c a pound for 1934, the average yield being 1048 lbs. an acre. **The cost of production varied between 12,6 and 27,2 c a pound on an average**. The result of the study in 1935 was affected by adverse weather conditions, pest damage, labour difficulties and low market prices. The estimated production of dry hops averaged 1232 lbs. an acre, of which 17% were not harvested. On the basis of the actual harvested yield of 973 lbs. an acre, the total cost was 16,6 c a pound. The latter varied from 10,6 to 55,5 c a pound, the acreage unpicked ranging from 6 to 55 p. c. The yards reporting normal harvest conditions had an average cost of 15,8 c a pound on a yield of 1128 lbs. an acre. The **cash cost** amounted to 61 p. c. of the total in 1934 and 69 p. c. in 1935.

In the study of the **capital investment** 79 farms having an average size of 48½ acres cooperated. It is estimated at \$ 355 per acre of which 49 p. c. represent the value of the land in hop yard, 24 p. c. plants and trellis, 13 p. c. drier and storeroom and 14 p. c. machinery.

The yield is considered the major factor affecting costs. On the very large hop operations the costs are higher than those on the smaller units. Large operators more commonly try to prevent disease and pest infestation, more of the large yards are irrigated and fertilized, they have more elaborate equipment facilities and use more expensive labour especially during the harvest. Many of the smaller operators take a chance by not spraying at all against pests, or less frequently.

Development in Prices.

By end of April 1936 prices had dropped to 7 to 9½ c for 1935 Oregons and 5 to 9 c for Yakimas, contracts were written down for the 1936 crop at 12 to 13 c. The serious attack of downy mildew in May and June 1936 and the prospective shortage of the new crop turned prices upwards and till end of August made them climb about 25 c to 30 to 35 c per pound. Contracts for 1936 hops rose to 35 and 40 c and three years contracts were paid up to 35 c for 1936, 25 c for 1937 and 20 c for 1938 crop. Older growth was not obtainable below 20 to 15 c.

Before picking began, the bulk of the 1936 crop had been contracted. Therefore American growers derived little benefit from the advance in prices as many of them had sold their crops at about 20 c or at cost or below. On account of the short crop many growers were unable to fulfill their low priced contracts.

During picking of the 1936 crop prices for the new hops were 40 to 42½ c and slowly rose 2½ c till beginning of November. At this time transactions became of a smaller volume. Hops were held quite steady at prices of about 45 c for choice, mediums around 42 c and lower grades from 39 to 41 c net to growers. Notwithstanding the very favourable statistical position **the slow trading caused an easier feeling in November**. The prices of poorer grades declined 3 to 5 c. In May 1937 prices were between 35 and 40 c with an easier tendency. The stocks were picked out and a small proportion of fine quality was left.

In the months following October 1936 one year contracts for 1937 hops were closed from 22 to 25 c, three years contracts between 21 and 25 c for the first, between 19 and 23 c for the second and between 17 and 22 c for the third year.

The New York State crop yielded 450 bales which were sold from 50 to 60 c net to growers.

The unsold stock of 1936 hops in growers' hands was estimated on May 1st, 1937 at about 10.449 bales as against 28.265 bales of 1935 hops a year ago; the unsold stock together with that one of hops of former years amounted on May 1st, 1937 to about 80.425 bales as compared with about 106.249 bales in the previous year.

Hop Pool.

Endeavours are being made to take the 1934 and older hops out of the market after the 1937 crop. Until middle of April, 1937 out of 65.000 bales remaining in growers' hands about 63.000 bales of 1934 and older hops were committed to a pool. The "Pacific Coast Hop

Stabilization Corporation" has been established to promote the distribution of the burdensome stocks of 1934 and older hops. There is small demand for the older hops in U.S.A. as everywhere. If the size of the 1937 crop be big enough then it is hoped the government will take them over.

With the exception of California with an increase to about 6,800 acres one does not expect a substantial increase of the acreage in 1937 except the yards where the trellises were left standing. Wages are twice as high as they were two years ago and prices offered growers for contracts were not considered high enough to encourage new planting.

Increase of acreage.

The **consumption of hops** for brewing purposes can be estimated at **37,052,000 lbs.**, based upon a **beer-production in 696 breweries of 56,156,200 barrels in 1936** and a quantity of hops of 0.66 lbs. per barrel. Further about 900,000 lbs. are said to be used by other consumers. From January until end of April 1937 the **beer-production is again 13.5% higher** than in the same period of 1936, so that if the rise continues one must reckon with a total consumption of hops in 1937 of roughly 215,000 bales of 200 lbs. each.

Consumption, imports, exports.

The small 1936 crop caused **increased imports** which during September 1st, 1936 to March 31st, 1937 amounted to 8,836,136 lbs. as compared with 4,340,302 lbs. in the same period of the preceding year. On the other hand the **exports** from September 1936 to March 1937 are considerably smaller with 2,423,700 lbs. as compared with 5,971,112 lbs. in the same period of the previous year:

	Imports to U.S.A.	Exports from U.S.A.
calendar year 1934	6,119,295 lbs.	6,001,492 lbs.
calendar year 1935	5,272,794 „	6,221,368 „
calendar year 1936	8,942,422 „	3,424,323 „

In **Germany** the stocks at the beginning of May 1937 amounted to about 720,000 lbs. of 1936 hops and to 990,000 lbs. of 1935 hops. The surplus stock of 1936 hops amounted in **Czechoslovakia** to about 550,000 lbs., in **Jugoslavia** to about 275,000 lbs., in **Poland** to approximately 330,000 lbs., in **France** to 110,000 lbs. and in **Belgium** to about 150,000 lbs., making a total surplus stock of Central European hops of approximately 2,135,000 lbs. as against about 3,235,000 lbs. of 1935 hops at the end of June 1936. In addition there is an unsold quantity of 1936 hops in **England** in the hands of the H.M.B. of about 1,322,000 lbs. and in the **United States of North America** of approximately 2,000,000 lbs. (about 10,000 bales). Considering the reduced free stocks and those of the breweries which are of normal quantities, the situation of the market can be regarded as absolutely sound.

Stocks End of May 1937.

Snow and cold in **Germany** continued until January. There was an abundance of rain from February to April inclusively. Complaints were made of losses in the districts with heavy soil, due to the rotting of many plants. Grub-worms were noticed in some parts causing serious damage as has also been the case last autumn. Unfortunately there is no effective remedy against this vermin. At the beginning of May wet and hot weather set in so that the vines could develop well and soon had made up for lost time. Hop-fleas only did damage to plants set out later. There will hardly be any district in Germany where the spraying against downy mildew has not yet been effected two or three times. In some parts of the Hallertau and Spalt districts hail caused damage on May 21st, 27th and 31st. The hot days in June were favourable to the growth. By that time the vines had reached three quarters and more of the height of the trellis. There were numerous lateral branches. Night dew owing to the heat caused the spreading of downy mildew.

Report about Growth of the 1937 Crop on June 10th, 1937.

In **Czechoslovakia** the first growth suffered from hop-fleas and snout-beetles. At the middle of May plants infested by downy mildew were found in young gardens. Aphis appeared at the same time and soon its descendants, unwinged lice, began to spread, especially in the low lying districts. The growth was helped by the wet and warm weather in May and beginning of June, and the state of the plants is considered as satisfactory.

In **Poland** the plants have developed unusually rapidly since the beginning of May, owing to the very hot weather and up to the present they have been sound.

Jugoslavia: In **Slovenia** the plants made good progress, the state of the gardens is still unequal. In **Wojwodina** downy mildew had been noticed, but the producers were not inclined to spray on account of the low prices they received for their hops.

Spring in **England** was wet and cold and the first work in the fields was retarded. End of May the plants were reported to be strong and healthy. In June there was a strong attack of aphis.

In **U.S.A.** the first work was also delayed by the wet weather in April. Downy mildew was noticed in many gardens of the three states of the West Coast, and in some cases the vines had to be cut short three or four times. The month of May brought clear and dry weather thereby preventing the further spreading of downy mildew.

The consumption of hops in 1936/37 on basis of known figures is calculated as follows:

World's Hop Consumption 1936/37.

	Beer-Production 1936 American barrels	Dose of hops per barrel in lbs.	Hop Consumption in 1000 lbs.
Austria and Hungary	2,060,378	0.67	1,385
Balkan	158,491	0.64	102
Baltic States	503,591	0.71	358
Belgium and Luxemburg	12,206,332	0.58	7,104
Czechoslovakia	6,444,432	0.77	5,000
Dantzic	55,387	0.64	36
Denmark, Iceland	1,904,443	0.42	813
France	12,091,299	0.48	5,786
Germany	33,984,304	0.58	19,690
Netherlands	992,697	0.55	552
Norway	377,480	0.55	210
Poland	996,957	0.64	645
Roumania, Jugoslavia	561,534	0.77	436
Russia	3,152,770	0.64	2,039
Spain, Portugal, Italy	864,029	0.64	559
Sweden	2,169,447	0.42	926
Switzerland	1,740,840	0.51	900
Continent	80,264,411	—	46,541
Great Britain	23,328,794	1.23	28,662
Irish Free State	2,568,229	1.94	4,982
Europe	106,161,434	—	80,185
Africa	466,951	0.90	423
Australia and New Zealand	2,908,217	1.16	3,385
Canada	2,118,321	0.97	2,055
Central America	1,289,227	0.64	834
Eastern Asia	2,114,060	0.64	1,367
India, Dutch Indian Colonies	99,696	1.16	116
South America	4,259,648	0.64	2,755
United States of America	56,156,799	0.66	38,031
World's consumption	175,574,353	—	129,151

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IMPORTANT NOTE: ALL BARRELS mentioned in this report are to be understood in **AMERICAN BARRELS.**

1 American barrel = 31 gallons = 117.35 liter; 1 English barrel = 163.57 liter or 1.383 American barrels.
 1 American gallon = 4 quarts = 8 pints = 160 ounces = 1,280 drams = 76,200 minims.
 1 liter = 1.77 pints = 35 ounces = 283 drams = 17,000 minims.
 1 cwt. = 112 lbs., 1 Zentner = 110.2 lbs., 1 cwt. = 1.016 Zentner, 1 lb. = 0.453 kilos.
 1 bushel malt = 34 American lbs.; 1 bushel barley = 48 American lbs.
 1 foot = 30.48 cm; 1 cm = 0,0329 foot. 1 inch = 2,54 cm; 1 cm = 0,394 inch.

NEW YORK EXCHANGE on June 1st, 1937:

1 US \$ = Reichsmark (RM) 2.466	1 £ = US \$ 4.935	1 US \$ = French Francs (ffrs.) 22.428
1 RM = US \$ 0.40	1 US \$ = Czechosl. Crowns (Kc.) 28.674	1 US \$ = Belgian Francs (bfrs.) 29.665
1 US \$ = Pound Sterling (£) -4.1	1 US \$ = Jugosl. Dinars 42.918	1 US \$ = Polish Zloties (Zl.) 5.277