

# Joh. Barth & Sohn

HOPS SINCE 1794

HOP FARM BARTHOF HALLERTAU

TELETYPE 06/22030  
CABLE ADDRESS:  
BARTHSONN NÜRNBERG

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July 25th, 1964

## Hop Report 1963/64

The tragic death of John F. Kennedy, President of the U.S.A., on November 22nd, 1963, was a profound shock to the world. No adverse influences, however, resulted either in the political situation or in the world economy which was in a new upswing since the middle of 1963.

**Economical  
Situation**

The favourable development within the European Economic Community (E.E.C.) continued. Inflationary tendencies, however, especially prevalent in Italy and France, cannot be disregarded. This situation might prove a danger to other member states.

In 1963, the Federal Republic of Germany was able to increase the favourable balance of Foreign Trade to DM 6.0 billions (1962: DM 3.5 billions). After deducting the deficit of the balance of payment including contributions (assistance to countries of development, etc.) led to a net favourable balance of DM 1.05 billions (1962: deficit DM 1.3 billions).

World production of beer in 1963 showed an **increase** of about 13.2 million bbl. as compared to 1962. The percentage rates of the increase are as follows: Western Europe +3.5%, Eastern Europe -3.1% (adjusted after corrected estimate DDR), North America +6.9%, South America +0.5%, Africa +6.1%, Asia +12%, Australia and Oceania +1.4%.

**Production  
of Beer**

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	
	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. = 1,016.048 kg	
1 metr. Tonne = 20 Ztr. = 1000 kg = 1.10231 shorttons	= 0.98419 longtons	
1 Ztr. = 50 kg = 110.23 lbs. = 1.102 cwt. (USA.)	1 cwt. (USA.) = 100 lbs. = 45.36 kg = 0.9072 Ztr.	
	0.984 cwt. (Brit.)	1 cwt. (Brit.) = 112 lbs. = 50.8 kg = 1.016 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.	
	56 lbs. = 25.4 kg (corn, milocorn)	1 Ztr. = 1.9685 bu.

DM 1.— = US\$ —.25 / DM 4.— = US\$ 1.— / US\$ 2.80 = DM 11.20 = £ 1.—

1 mm precipitations = 1 Ltr. of water per m<sup>2</sup>, 1 mm = 0.04 Inch, 1 Inch (100 points) = 25 mm

Conversion of thermometer degrees In Fahrenheit and Celsius:

$$86^{\circ} F = \frac{(86-32) \cdot 5}{9} = 30^{\circ} C \quad 30^{\circ} C = \frac{30 \cdot 9}{5} + 32 = 86^{\circ} F$$

Production of Beer 1963					
Country		1000 bbl. of 31 gall. each		Country	1000 bbl. of 31 gall. each
Germany W	56,577			b. f.	2,710
East*)	11,505	68,082		Cameroons	341
England		39,969		Nigeria	322
USSR*)		24,033		Kenya	266
France		14,596		Angola	256
Czechoslovakia		14,147		Marocco	256
Belgium		12,357		Algiers	256
Poland		6,183		South Rhodesia	237
Austria		5,512		Ruanda-Burundi	183
Spain		4,466		Sambia	167
Denmark		4,092		Ivory Coast	162
Netherlands		3,757		Egypt*)	145
Hungary		3,478		Tunis	128
Switzerland		3,462		Ethiopia*)	111
Italy		3,204		Senegal	107
Ireland		2,899		Moçambique	94
Sweden*)		1,781		Ghana	77
Roumania*)		1,662		Sudan*)	77
Jugoslavia*)		1,523		Dahomey	68
Finland		943		Uganda	67
Bulgaria*)		937		South West Africa	49
Norway		883		Tanganjika	47
Luxembourg		400		Centrafri. Republic	43
Portugal*)		384		Guinea	34
Greece		337		Rep. Congo (Brazzav.)	29
Malta*)		27		Madagascar	21
Iceland		14		<b>Africa</b>	
<b>Europe</b>			219,128	Japan	14,467
U.S.A.		100,631		Philippine Islands*)	1,108
Canada		14,453		Vietnam	469
Brazil		7,670		China*)	426
Mexico*)		7,244		Turkey*)	273
Columbia*)		6,136		Singapore	210
Venezuela*)		2,301		Israel*)	162
Peru*)		1,364		Hongkong*)	136
Argentine		1,129		Indonesia	124
Chile		963		India	106
Cuba*)		767		South-Korea	102
Uruguay*)		511		Lebanon*)	85
Puerto Rico*)		387		Thailand	72
Ecuador*)		334		Formosa*)	68
Dominican Republic*)		244		Iran*)	68
Bolivia*)		222		Ceylon	56
Panama*)		213		Cyprus	43
Honduras		174		Iraq*)	37
Guatemala		171		Malaya*)	34
El Salvador		167		Syria*)	21
Jamaica		155		Pakistan	17
Costa Rica*)		94		<b>Asia</b>	
Nicaragua*)		69		Australia	9,914
Trinidad		68		New Zealand	2,247
Paraguay		57		Tahiti	13
Martinique		17		New Caledonia*)	4
<b>America</b>			145,541	Australia/Oceania	
Congo (Leopoldv.)		1,747		<b>Total</b>	
Un. of South Africa		963			18,084
c. f.		2,710	364,669		12,178
				*) = estimate	401,184

### Beer Output in Western Germany

Output of beer in Western Germany during the year 1963 amounted to . 54,790,170 bbl.  
Production of beer in the Western sector of Berlin for the same period was . 1,786,897 bbl.  
Total 56,577,067 bbl.

These figures include 827,674 bbl. for exports delivered tax-free (1962 = 809,005 bbl.)  
as well as sales against foreign currency and to the occupation forces totalling 313,711 bbl.  
(1962 = 325,927 bbl.).

### Imports of Beer 1963

The imports of beer to Western Germany amounted to 290,774 bbl. in 1963.

## Crop 1962 (Supplement)

Complete figures of imports and exports of hops crop 1962 during the period from September 1st, 1962, to August 31st, 1963, can now be stated as follows:

	Import	Export
Germany . . . . .	5,273,403 lbs	10,758,668 lbs
Belgium . . . . .	3,381,856 lbs	1,946,662 lbs
England . . . . .	1,593,705 lbs	2,218,709 lbs
U. S. A. . . . .	5,509,516 lbs	20,468,168 lbs

Crop 1962 was sold out until the middle of 1963 so that no stocks had to be taken over into the new crop year. There was, however, little demand, so that the market remained entirely quiet.

## Crop 1963

The year 1963 brought generally favourable climatic conditions for the growth of hops. The winter 1962/63 left no damages in hop yards despite constant cold temperatures down to  $-25^{\circ}$  C, as there was sufficient snowcover from the end of November 1962 until March 1963. The hops came well out of dormancy and were off to a good start. **Spring Work** was retarded as a consequence of the weather. Beginning during the second part of April, hop yards could develop well under favourable weather and welcome rainfalls. Some **Wind Whipping** was caused by repeated windy and sometimes stormy weather. Pests and diseases were controlled by preventive sprayings and were no danger for the hops. It remains only to note that **Verticillium Wilt** continues to appear especially in the Hallertau. **Picking** started generally somewhat earlier than normal and resulted in a greater harvest than the year before.

**Growth of the  
Hops  
Crop 1963  
in Germany**

Weather data from the Experimental Hop Farm Hüll/Hallertau							
1963	March	April	May	June	July	August	Sept.
Precipitations per month (mm)	48	38	79	124	74	86	68
Monthly average of air temperature $^{\circ}$ Celsius	0.5	8.4	11.4	16.0	17.6	15.6	13.4
Maxima of air temperature $^{\circ}$ Celsius	13.1	19.6	23.4	28.6	31.6	31.9	23.6
Minima of air temperature $^{\circ}$ Celsius	-23.4	-1.9	-0.4	4.6	5.1	3.7	0.5
Monthly average of relative humidity %	81	79	78	75	77	81	84
Other data:	days	days	days	days	days	days	days
Snowfall	1	—	—	—	—	—	—
Rain and snow	3	1	—	—	—	—	—
Thunderstorm	—	—	4	8	4	2	1
Storm	—	—	—	1	—	—	—
Hoarfrost	4	5	1	—	—	—	—

**HALLERTAUE.** The winter started early in 1962 with low temperatures. In this way, the **Uncovering** and **Cutting** of the hops which in the Hallertau already takes place to a considerable extent during the autumn was interrupted. **Spring Work** started at the beginning of April 1963 and was finished by the end of that month despite cold weather. The hops had numerous and strong shoots. There were no damages by pests except a sporadic appearance of **Caterpillars**. The quick finishing of the spring work was due to an increased use of machines.

The hop plants could grow healthy and forcefully during May despite cooler weather. Preventive sprayings against pests and diseases were effected. The hop yards were carefully cultivated and manured. Strong winds and dry weather interrupted growth at the end of May/beginning of June.

A storm with **Hails** occasioned local damages within the centre of the Hallertau on June 22nd. Generally, the weather was sultry and the plants showed a very good development. The vines had reached the height of the trellises in many yards and had formed well developed **Laterals**. Occasionally, there appeared already **First Bloom**. As a consequence of considerable humidity, hop yards on heavy soils did not prosper as well as those on lighter soils. **Burrs** appeared sooner than usual. Sprayings against Downy Mildew and pests were carefully executed despite water logged gardens.

## Acreage, Yield and Production 1962 and 1963

	Acreage 1962 Acres	Yield Pounds per acre	Production 1962 Pounds	Acreage 1963 Acres	Yield Pounds per acre	Production 1963 Pounds
Hallertau . . . . .	14,767	1,782	26,318,294	16,167	1,805	29,183,282
Spalt . . . . .	2,271	1,142	2,593,602	2,340	1,714	4,010,057
Hersbruck . . . . .	1,203	1,002	1,205,365	1,272	1,439	1,829,928
Jura . . . . .	420	1,757	737,990	477	1,771	844,913
Bavaria . . . . .	18,661	1,653	30,855,251	20,256	1,771	35,868,180
Tettnang . . . . .	1,767	1,538	2,718,382	1,831	1,807	3,309,215
R.H.W. . . . .	250	1,082	270,394	250	1,459	364,641
Baden . . . . .	62	1,207	74,846	59	1,526	90,058
Rheinpfalz . . . . .	54	1,078	58,201	54	1,564	84,436
<b>Germany West . . . . .</b>	<b>20,794</b>	<b>1,634</b>	<b>33,977,074</b>	<b>22,450</b>	<b>1,769</b>	<b>39,716,530</b>
<b>Germany East . . . . .</b>	<b>5,152</b>	<b>630</b>	<b>3,245,171</b>	<b>5,152</b>	<b>1,136</b>	<b>5,851,008</b>
Saaz (Zatec) . . . . .	16,284	727	11,840,576			
Auscha (Ustek) . . . . .	3,632	855	3,104,738			
Other Districts . . . . .	890	782	696,323			
<b>Czechoslovakia . . . . .</b>	<b>20,806</b>	<b>752</b>	<b>15,641,637</b>	<b>21,053</b>	<b>943</b>	<b>19,859,037</b>
Alsace . . . . .	2,595	1,104	2,865,980	2,595	1,614	4,188,740
Dep. Côte d'Or . . . . .	232	713	165,345	234	1,272	297,621
Northern France . . . . .	383	1,209	462,966	420	1,391	584,219
Lorraine . . . . .	30	919	27,558	30	1,102	33,069
<b>France . . . . .</b>	<b>3,240</b>	<b>1,087</b>	<b>3,521,849</b>	<b>3,279</b>	<b>1,591</b>	<b>5,103,649</b>
Alost . . . . .	766	1,439	1,102,300	790	1,465	1,157,415
Poperinghe . . . . .	1,310	1,262	1,653,450	1,458	1,436	2,094,370
Vodelée . . . . .	49	1,125	55,115	49	1,350	66,138
<b>Belgium . . . . .</b>	<b>2,125</b>	<b>1,323</b>	<b>2,810,865</b>	<b>2,297</b>	<b>1,444</b>	<b>3,317,923</b>
Slovenia . . . . .	5,589	1,174	6,562,764	5,661	1,111	6,290,495
Backa . . . . .	3,588	1,445	5,183,014	3,879	1,194	4,629,660
<b>Jugoslavia . . . . .</b>	<b>9,177</b>	<b>1,280</b>	<b>11,745,778</b>	<b>9,540</b>	<b>1,145</b>	<b>10,920,155</b>
Austria . . . . .	259	990	256,285	250	1,354	338,406
Galicía . . . . .	554	695	384,813	583	904	527,230
León . . . . .	1,611	769	1,239,536	1,856	964	1,789,364
Asturias . . . . .	319	624	198,965	408	637	259,812
Vasco Navarra . . . . .	—	—	—	—	—	—
<b>Spain . . . . .</b>	<b>2,484</b>	<b>734</b>	<b>1,823,314</b>	<b>2,847</b>	<b>905</b>	<b>2,576,406</b>
Switzerland . . . . .	27	1,347	36,376	30	1,213	36,376
Roumania . . . . .	1,977	368	727,518	1,977	401	793,656
Bulgaria . . . . .	2,224	446	992,070*)	2,619	387	1,014,116
Hungary . . . . .	1,730	525	908,516	1,730	495	856,156
Poland . . . . .	5,757	831	4,783,982	6,237	914	5,700,434
USSR . . . . .	29,652	446	13,227,600*)	29,652	446	13,227,600*)
<b>Continent . . . . .</b>	<b>105,404</b>	<b>889</b>	<b>93,698,035</b>	<b>109,113</b>	<b>1,002</b>	<b>109,311,452</b>
Kent . . . . .	11,196	1,428	15,988,972	11,559	1,462	16,899,251
Hants . . . . .	605	1,647	996,700	645	1,548	998,573
Surrey . . . . .	116	1,327	153,881	103	1,277	131,504
Sussex . . . . .	1,784	1,439	2,567,036	1,841	1,474	2,714,414
Hereford . . . . .	4,490	1,521	6,829,300	4,603	1,471	6,772,862
Worcester . . . . .	2,071	1,584	3,280,335	2,150	1,502	3,229,408
Other Counties . . . . .	54	1,631	88,073	54	1,600	86,420
<b>England . . . . .</b>	<b>20,316</b>	<b>1,472</b>	<b>29,904,297</b>	<b>20,955</b>	<b>1,471</b>	<b>30,832,432</b>
<b>Europe . . . . .</b>	<b>125,720</b>	<b>983</b>	<b>123,602,332</b>	<b>130,068</b>	<b>1,077</b>	<b>140,143,884</b>
Washington . . . . .	17,999	1,410	25,380,127	20,598	1,560	32,136,234
Oregon . . . . .	3,800	1,380	5,244,082	4,001	1,350	5,399,947
California . . . . .	4,099	1,710	7,011,069	4,099	1,660	6,806,041
Idaho . . . . .	3,400	1,940	6,596,053	4,001	1,770	7,079,852
<b>U.S.A. . . . .</b>	<b>29,298</b>	<b>1,510</b>	<b>44,231,331</b>	<b>32,699</b>	<b>1,573</b>	<b>51,422,074</b>
<b>Canada . . . . .</b>	<b>1,028</b>	<b>1,575</b>	<b>1,618,728</b>	<b>1,055</b>	<b>1,403</b>	<b>1,480,720</b>
Victoria . . . . .	457	1,688	771,610	479	1,707	817,576
Tasmania . . . . .	1,470	1,930	2,836,769	1,488	1,923	2,861,901
<b>Australia . . . . .</b>	<b>1,927</b>	<b>1,873</b>	<b>3,608,379</b>	<b>1,967</b>	<b>1,871</b>	<b>3,679,477</b>
New Zealand . . . . .	534	1,663	888,123	554	1,198	663,805
Japan . . . . .	3,109	1,174	3,649,274	3,617	1,224	4,426,506
Manchuria . . . . .	247	402	99,207*)	247	402	99,207*)
Northern-Korea . . . . .	1,236	143	176,368*)	1,236	143	176,368*)
Argentina . . . . .	726	571	414,465	726	288	209,437*)
South Africa . . . . .	274	582	159,393	269	405	133,158
<b>Total . . . . .</b>	<b>164,099</b>	<b>1,087</b>	<b>178,447,600</b>	<b>172,438</b>	<b>1,174</b>	<b>202,434,636</b>

\*) Estimate

\*\*) Official Weight April 9th, 1964

The vines made very good growth during the second half of July under warm weather and welcome precipitations. The hop yards showed a luxurious stand and the **Formation** of the **Cones** was satisfactory. Further development of the cones was favoured by hot summer weather during the first half of August. As a sign of especially good growth, there was secondary bloom to be noted. **Picking** started at the end of August somewhat earlier than normal. Rainfalls occasionally hampered the harvest.

**Quality.** Hallertau hops, crop 1963 had cones of middling size and not always uniform growth. The colour was green to greenish-yellow with occasional **Wind Whipping**. The light coloured lupulin had a good and fine aroma, but was not so amply present as the year before. Hallertau hops showed the influence of machine picking and the drying was not always satisfactory.

**SPALT.** The **Uncovering** and **Cutting** started sporadically during the first week in April. **Spring Work** was finished generally by the end of April. The hills showed a good development of shoots. During May, the plants grew well and reached a height up to two meters. The development continued to be favoured by good weather until June. Sprayings against pests and diseases were carefully effected.

Unfavourable weather sometimes with **Hail** caused local damages during the second half of June. Later on, however, the weather turned favourable again and there was sufficient soil moisture present. It was necessary to carefully control **Red Spider** as well as **Downy Mildew**. On the average, the plants were strong and healthy and had reached the height of the trellises in a number of yards.

During the first half of July, tending the hop yards became difficult as a consequence of strong rainfalls which, however, were all to the good for the growth of the hop plants. The vines had already formed some overhang and developed long and strong **Laterals**. Occasionally first **Burrs** were noted. There was no interruption in the control of pests and diseases.

The hop gardens continued to develop satisfactorily during the first half of August under very warm weather even if precipitations were not always sufficient. The **Formation** of the **Cones** was favoured by warm temperatures and sunshine. **Red Spider** had to be controlled continuously in consequence of the dry and warm weather. Later on, the **Ripening** of the hops was delayed by lack of sunshine.

**Picking** started sporadically on August 22nd and was in full swing on August 26th. Considerable rainfalls resulted in a wet pick and consequently sometimes too insufficient kilning of the hops.

**Quality.** The cones of Spalt hops, crop 1963 were not uniform in growth and generally of middling to large size. The cones were in part of somewhat coarse growth and had sapful sprigs. Occasionally there were some seeds to be found. The colour was greenish-yellow on the average with some **Wind Whipping**. Light coloured lupulin with generally fine aroma was less amply present than the year before. It has to be stated that the picking of the hops was not satisfactory. It is urgently necessary to remove foreign matter from the hops. The drying of some lots of Spalt hops, too, was not so good as in other districts of production.

**TETTANG.** Spring weather was delayed longer than usual in Tettang. The sometimes deeply frozen ground was thawed out only by the end of March and there were **Snowfalls** even at the beginning of April. **Spring Work** could be started only a fortnight later than normal and was finished under dry weather conditions by the end of April.

Weather conditions during May were not favourable for the hops as a consequence of strong precipitations and cool temperatures. There were, however, no frosts and the constant rainfalls improved subsoil moisture. The development of the hops was considerably retarded against normal years.

Almost all hop plants could reach half the height of the trellises during the first half of June and only late cut gardens were somewhat more retarded in growth. Favourable climatic conditions continued during June and favoured the development, so that the delay in growth could be set off.

At the beginning of July, the vines had reached the height of the trellises and formed some overhang as well. Warm weather with welcome rainfalls continued. **Downy Mildew** as well as **Aphids** had to be carefully controlled whereas **Red Spider** was less in evidence. The vines developed numerous **Laterals** and showed first **Burrs** by the end of July. At the beginning of August, hot summer weather started and retarded the growth of the plants. Hop yards on lighter soils sometimes showed the influence of the lack of moisture. The **Formation** of the **Cones** had already started in these gardens whereas in late locations the plants were still in bloom. Hop yards showed a healthy and uniform aspect. The **Formation** of the **Cones** as well as the **Ripening** of the hops could proceed well despite occasional insufficient humidity. **Picking** was finished by the end of August.

**Quality.** The cones of the Tett nang hops were of middling size and rather equal in growth. The colour was green to greenish-yellow and there was occasional wind whipping. Light lupulin with fine and mild aroma was somewhat less present than the year before. The pick of the hops as well as the kilning generally was more satisfactory as with hops from other proveniences.

**HERSBRUCK GEBIRGE.** An uninterrupted snowcover was present from November 1962 until March 1963. There were still cold spells until the end of March so that the **Uncovering** and **Cutting** could start only at the beginning of April. This work was finished under dry weather conditions during the second half of April. The hops were off to a good start and showed a good development at the beginning of May when growth was hampered once again by cooler weather. Preventive sprayings against **Downy Mildew** were effected.

By the end of May/beginning of June, warmer temperatures were interrupted occasionally by cool nights. As a consequence of additional rainfalls, the growth of the plants went on quite well. At that time, about half to three quarters of the height of the trellises was reached. There were scarcely any pests or diseases to be noted as a result of preventive sprayings. **Hails** on June 18th and 22nd occasioned local damages which in part were quite severe. With this exception, the stand of the hop yards was good, although only part of the vines had reached the height of the trellises.

Ample precipitations continued during the second half of June and the weather became warmer, so that the plants could grow well and healthy. The height of the trellises was reached everywhere and some overhang was formed. **Laterals** were plentiful. The favourable development continued in July under fine summer weather. Early varieties were in **Full Bloom**, whereas late varieties showed first bloom. It was necessary to carefully control **Aphids**.

Welcome rains in August increased crop prospects and benefited both the **Formation** of the **Cones** and the **Ripening** of the hops under generally warm weather. **Picking** started generally on August 26th and was sometimes hampered by rainfalls.

**Quality.** Hersbruck hops, crop 1963 were rather unequal in size and growth. The cones had strong and sapful sprigs and some seeds. The colour was yellowish-green on the average, with the usual wind whipping. Contents of lupulin was noticeably smaller than the year before. The lupulin was of somewhat darker colour than usual and had a fruity aroma. The hops were not carefully picked as trash from picking machines was to be noted and the drying of the hops, too, could not satisfy.

Verification of the hop acreage in 1963, resulted in the following figures:

Districts	1939 Acreage acres	1963		
		Existing acreage acres	Additional acreage acres	Total acres
Hallertau . . . . .	11,317	14,628	1,539	16,167
Spalt . . . . .	2,276	2,202	138	2,340
Hersbruck . . . . .	2,118	1,184	89	1,273
Jura . . . . .	200	425	52	477
Tett nang*) . . . . .	—	27	—	27
Aischgrund/oth. distr.	200	12	—	12
Bavaria . . . . .	16,111	18,478	1,818	20,296
Wurttemberg/RHW . . . . .	1,223	227	—	227
Tett nang**) . . . . .	1,636	1,730	74	1,804
Baden . . . . .	440	59	—	59
Baden-Wurttemberg	3,299	2,016	74	2,090
Pfalz . . . . .	151	54	—	54
Rheinland-Pfalz . . . . .	151	54	—	54
Germany . . . . .	19,561	20,548	1,892	22,440

\*) areas in Bavaria

\*\*) except areas in Bavaria

German  
Hop Acreage  
1963

Hop acreage  
1964

A further increase of the acreage is to be expected in 1964, too, especially in the Hallertau. In contrast to earlier times, when the acreage was increased or reduced practically only according to the farmers' impression of the situation, it is now to be noted that the expected yield of new hop yards is being sold for several years in advance on contracts. In this way a completely new type of regulation of the acreage results according to the foreseeable demand.

Verticillium  
Wilt

Weather conditions in 1963 favoured the spread of Verticillium Wilt. This disease was noted rather early during the growing season already and appeared in hop yards until shortly before picking time. There are no reliable details regarding the extent of this infection in the Hallertau. It has to be assumed that about 20% of the acreage = abt. 2,471 acres in the Hallertau are more or less infected with the Wilt.

The Wilt has now been observed locally in **Spalt**, as well as in the districts of **Jura** and **Hersbruck Gebirge**. As control measures up to now did not give satisfactory results, farmers are now considering more and more the planting of hops tolerant or resistant to this disease.

The *Bayerische Staatsministerium für Ernährung, Landwirtschaft und Forsten* has published a decree regarding the extermination of wild hops on November 21st, 1956. This decree is based on §2 of the law of August 26th, 1949 (WiGBI. S. 308). The extermination of wild hops has been mandatory already since 1929 (law of provenience § 4 RGBI 1929 S. 213). This work is to be supervised by local authorities. Hops of crop 1963 showed some seeds. In the district of Hersbruck Gebirge measures have been taken to discover and exterminate wild hops during the growing season of 1964.

85% of the German hops crop 1963 have been harvested automatically. Despite the fact that it is entirely possible to obtain a cleanly picked hop from picking machines comparable to the earlier hand picking, the hops of crop 1963 contained a not inconsiderable percentage of trash which later on cannot be separated anymore by the customary sieves. Furthermore, there are difficulties occasioned by other foreign matter in hops which contained even part of the vines and stones. This has already led to damages in the brewing house especially of brewing plant armatures and to losses of wort.

The problem of insufficient drying of the hops crop 1963 has already been mentioned in this report. Rainy weather during the harvest as well as the great yield have contributed to the situation. Decisive, however, is the fact that most farmers have increased acreage and picking capacity without a corresponding increase of kilning capacity. It is much to be regretted that official personnel in the halls of weighing scarcely attend to § 9 of the law of provenience according to which hops which are not fit for baling may be excluded from the sealing. It is to be hoped very much indeed that this state of affairs can be brought under control by the use of an apparatus for prompt and easy determination of excessive moisture in hops.

The above mentioned three points: seed content, foreign matter in hops and insufficient drying lead to an increasingly greater burden of the hop industry. The result is that the quality of German hops is under constantly more and more critical inspection in breweries both at home and abroad. In order to remedy the situation farmers have been called up by the Union of Hop Growers to attend to the production of quality hops more and more. The hop industry on its behalf will have to insist on a better selection of qualities when hops are delivered. In connection with a greater basis for hops selection as a consequence of increased harvests it will be possible to lead back the hop market once again to orderly proceedings.

**Seed Contents of Hops**

**Machine Picking**

**Hop Kilning**

**Quality of German Hops**

**Bitter Values of Crop 1963**

Origin	Total resin content anhydric	Soft resins %	Humulon %	Lupulon + Fraction of soft resin %		Hard resins %	Bitter value Wöllmer				
				%	%		1963	1962			
Hallertau . . . . .	15.9	13.2	83.01	5.6	35.22	7.6	47.79	2.7	16.99	6.5	7.6
Hallertau/Au . . . . .	15.9	13.3	83.65	6.0	37.74	7.3	45.91	2.6	16.35	6.8	7.3
Hallertau/Mainburg . . . . .	15.4	13.2	85.71	6.1	39.61	7.1	46.10	2.2	14.29	6.9	7.4
Hallertau/Wolnzach . . . . .	15.3	12.6	82.35	5.4	35.29	7.2	47.06	2.7	17.65	6.2	7.7
Spalt . . . . .	15.7	13.3	84.71	5.7	36.31	7.6	48.40	2.4	15.29	6.6	6.6
Tettngang . . . . .	17.6	15.3	86.93	7.0	39.77	8.3	47.16	2.3	13.07	7.9	8.5
Hersbruck . . . . .	15.0	12.7	84.67	5.3	35.33	7.4	49.34	2.3	15.33	6.1	6.4
Alsace . . . . .	15.6	13.3	85.26	4.7	30.13	8.6	55.13	2.3	14.74	5.7	7.0
Belgium/Northern-Brewer	21.1	18.1	85.78	9.6	45.50	8.5	40.28	3.0	14.22	10.6	12.8
Saaz . . . . .	14.9	12.3	82.55	5.5	36.91	6.8	45.64	2.6	17.45	6.2	6.5
Jugoslavia . . . . .	14.5	12.9	88.97	6.7	46.21	6.2	42.76	1.6	11.03	7.3	9.2
U.S. Seedless Yakima . . . . .	17.8	15.3	85.96	7.4	41.57	7.9	44.39	2.5	14.04	8.3	7.5

The bitter value of hops, that is to say especially the contents of lupulin as well as the fact that during the last years the bitter values of German hops are reduced more quickly than formerly cannot be directly influenced by farmers in contrast to the above discussed points (seed, foreign matter, drying). It must be borne in mind, however, that careful drying of the hops may have a not inconsequential role in connection with the early reduction of the bitter values.

The actual result of the German crop 1963 was more than 4% higher than the official estimates.

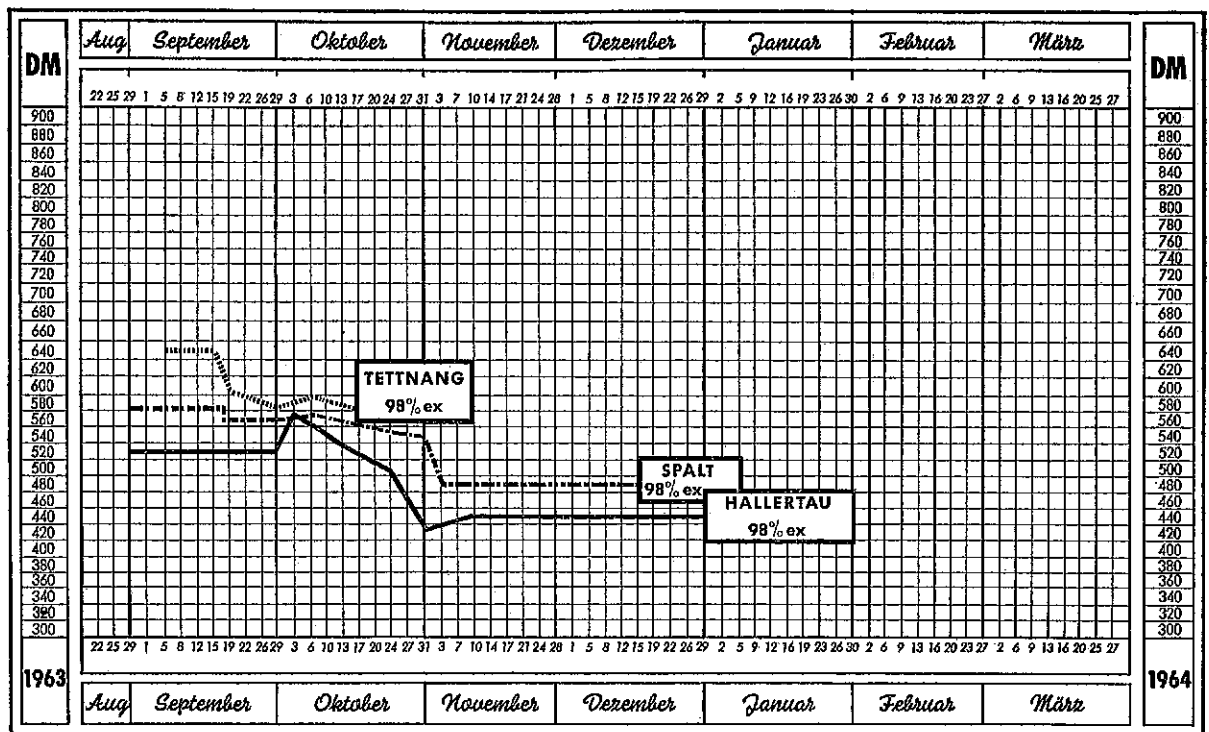
**Crop Estimate 1963**

	Yield estimated	Yield weighed on April 8th 1964
	lbs.	lbs.
Hallertau . . . . .	28,659,800	29,183,282
Spalt . . . . .	3,417,130	4,010,057
Tettngang . . . . .	2,976,210	3,309,215
Hersbruck Gebirge . . . . .	1,543,220	1,829,928
Wurttemberg . . . . .	330,690	364,641
Jura . . . . .	826,725	844,913
Baden . . . . .	88,184	90,058
Pfalz . . . . .	77,161	84,436
Total . . . . .	37,919,120	39,716,530

It ought to be especially mentioned that the development of daily purchases on farms has no longer the same importance as of old. Only about 100,000 cwts. or somewhat less than 30% of the crop were sold on the free market. These sales developed in two periods.

**Hop Purchase Crop 1963 in Germany**

The first period did lay between mid-September and the end of October. Farmers at the beginning maintained higher price ideas whereas the brewing industry hesitated with purchasing, expecting lower prices. As this expectation was not realized for the time being, the brewing industry resolved to cover the greater percentage of open demand by the end of September/beginning of October. During the second period beginning at the end of October, the German market came under the influence of the world market situation. Conforming to the general tendency, prices demanded on farms decreased. Trading was quiet during the months of November and December and during that time hops on farms were generally sold out.



**HALLERTAU.** First small sales by the end of October were effected at DM 500.—/550.—. This price bracket was maintained until September 20th. Somewhat stronger demand appeared about that time and trading was more active. At the beginning of October prices rose to DM 550.—/580.— but fell to DM 550.— once again until October 10th and were at DM 510.—/520.— by October 18th.

Slower demand resulted in decreased asking prices by farmers which reached DM 480.—/500.— on October 25th. On this basis, current purchases were effected and prices were lowered until the end of October to DM 430.—/460.—. Despite decreased purchasing, price demand increased by mid-November to DM 450.—. On this basis the district was sold out at a considerable extent until the end of December. On January 15th, 1964, official weighing exceeded already the crop estimate for the Hallertau which up to then had been repeatedly contested. The small lots still available on farms were sold at unattracted quotations of DM 430.—/450.— as far as owners were inclined to sell.

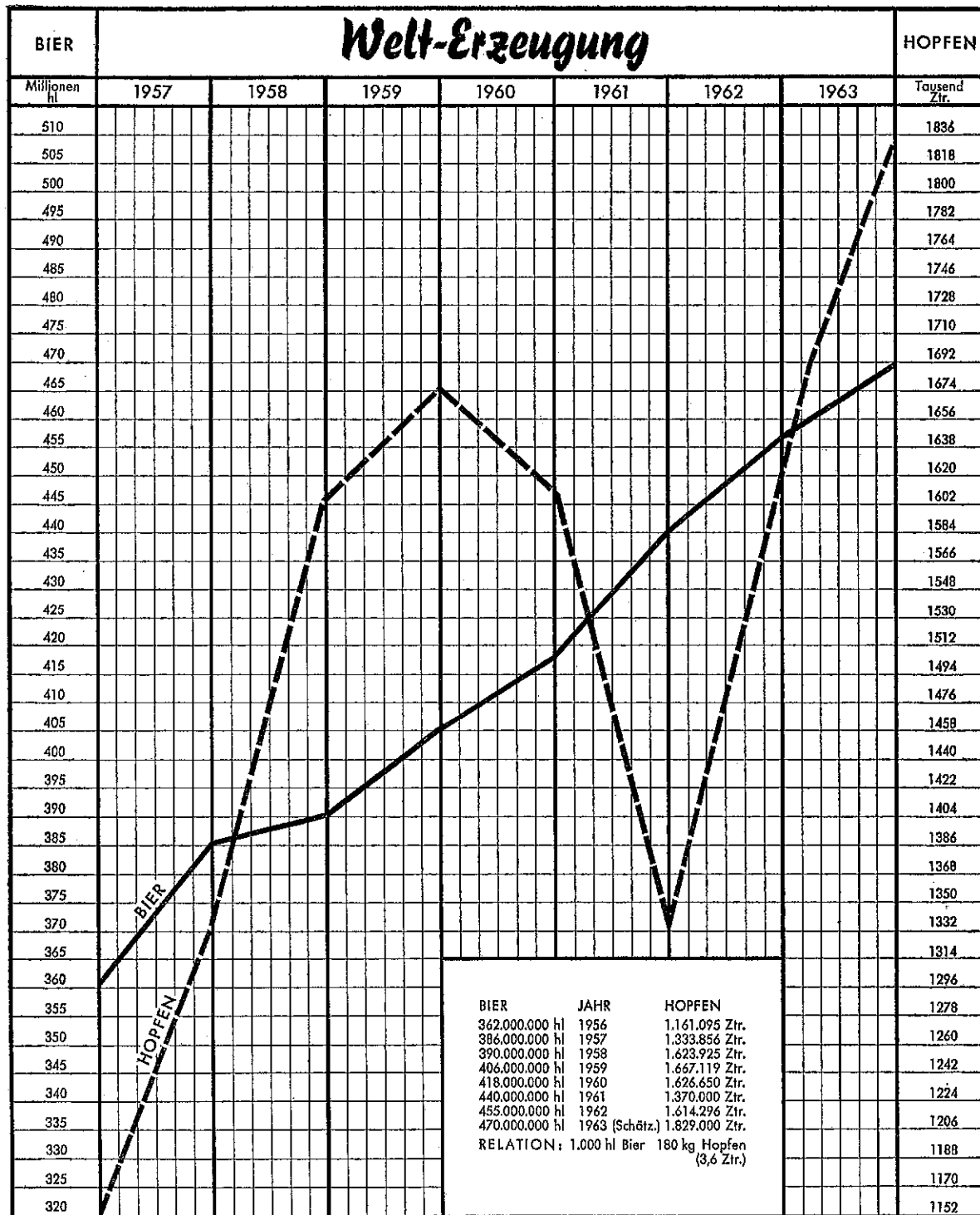
**SPALT.** First purchases at the beginning of the harvest were effected at DM 580.—/600.—. Quotations decreased during the second half of September to DM 550.—/580.— under slow trading. Somewhat stronger demand led to occasionally increased prices which, however, could not be maintained under lower purchasing activity during the first half of October. Prices were about DM 550.—/570.— during the first half of October, decreased to DM 550.— by the end of that month and were at DM 500.— at the beginning of November. There was very little demand for final lots on farms. Prices were about DM 480.—/500.— in November and final lots were sold out on this basis until the middle of December 1963.

As a result of the greater crop 1963 and in part as a consequence of the shifting of demand from Spalt to the Hallertau, the price differential between Spalt hops and Hallertau hops during this season was not so strongly pronounced as in former years.

**TETTANG.** Farmers in Tettang were especially reluctant sellers. Single first purchases at the beginning of September were effected at DM 650.—. Prices, however, went down to DM 570.—/580.— on September 17th under very slow trading. Stronger demand especially by breweries, purchasing directly on farms led to an increase of prices up to DM 600.— on September 20th, but this was only a passing event. Quotations were at DM 580.— by the end of September, increased in October under some more active trading once again to DM 600.— and were stabilized finally around DM 580.—. The district was sold out in mid-October with the exception of small remaining lots.



**HERSBRUCK GEBIRGE.** Purchases started hesitatingly at the beginning of the harvest. Small lots were traded at DM 450.—/480.— on September 6th. Further small purchases were effected at decreasing prices which were about DM 420.—/430.— in mid-September. The market maintained itself for some time on this basis and rose at the end of September to DM 430.—/450.— even if the market activity was quiet. Increased demand at the beginning of October resulted in farmers demands until DM 480.— which paralysed trading. Prices demanded rose even until DM 500.— until the middle of October, but real trading comprised only small occasional lots. The price basis was reduced to DM 450.— during the second half of October. Remaining lots were now sold and the district was sold out by the end of October.



World Production of Beer and Hops

The Nürnberg market formed a reliable opinion regarding the coming development for hops, crop 1963 at an early time, based on all available information both regarding the aspect of the crop and harvest prospects in all countries.

Nürnberg Market

Still remaining lots of Hallertau hops of the old crop 1962 had been sold until the end of July 1963. Final available stocks had been sold at prices until DM 700.— still during the first half of August 1963, whereas during the second half of that month prices were down until DM 430.— according to quality.

Trading in hops crop 1963 started at the beginning of September under generally quiet tendency. Quotations for Hallertau hops were around DM 590.—/600.—, Hersbruck DM 535.—. Demand was slower in mid-September and prices decreased especially for Hallertau hops until DM 550.—/560.—.

By the end of September/beginning of October, supplies on the Nürnberg market became smaller. Prices demanded were increased but there was little interest in purchases so that trading was small. Until the end of October prices decreased under slow trading and at the beginning of November reached DM 480.— for Hallertau hops, Spalt hops DM 565.—, Tettwang DM 600.—, Hersbruck DM 460.—. Prices were maintained especially for Hallertau hops with occasional oscillation on the same basis. There was little demand on the Nürnberg market for other proveniences after the districts of production had been sold out. Prices decreased until the end of January 1964 to DM 520.—/525.— for Spalt hops, Tettwang DM 530.—/545.—, Hersbruck DM 420.—, whereas Hallertau hops were maintained unchanged at DM 475.—/485.—.

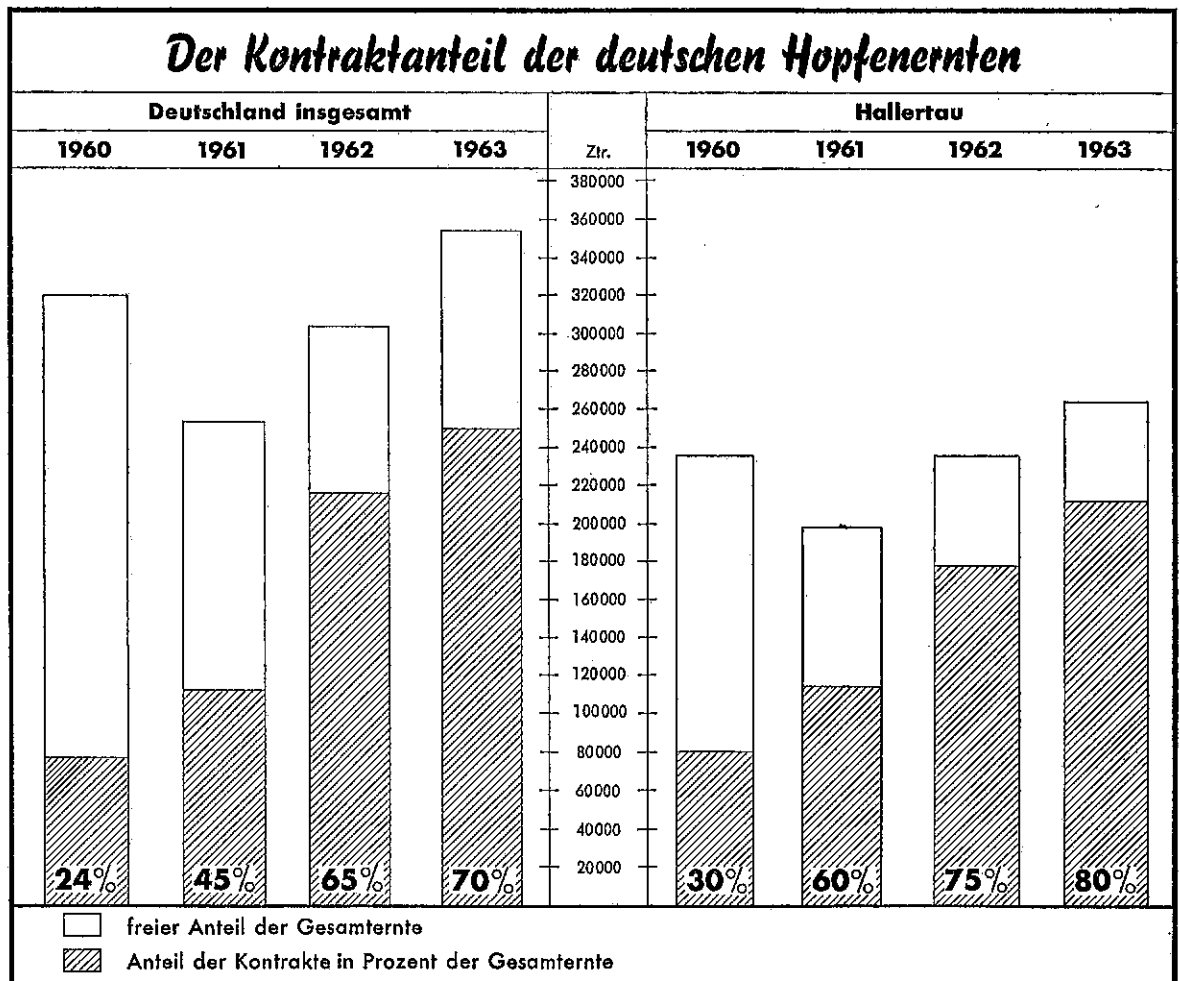
Under little demand in February and increased sales in March 1964 prices by the end of March were DM 435.—/450.— for Hallertau hops, Tettwang DM 500.—/505.—, Hersbruck DM 345.—/365.—. Supplies had decreased considerably. Prices for Hallertau hops were unchanged whereas quotations for other varieties were on the decrease (all quotations based on prices for interim packed hops).

**Market Survey**

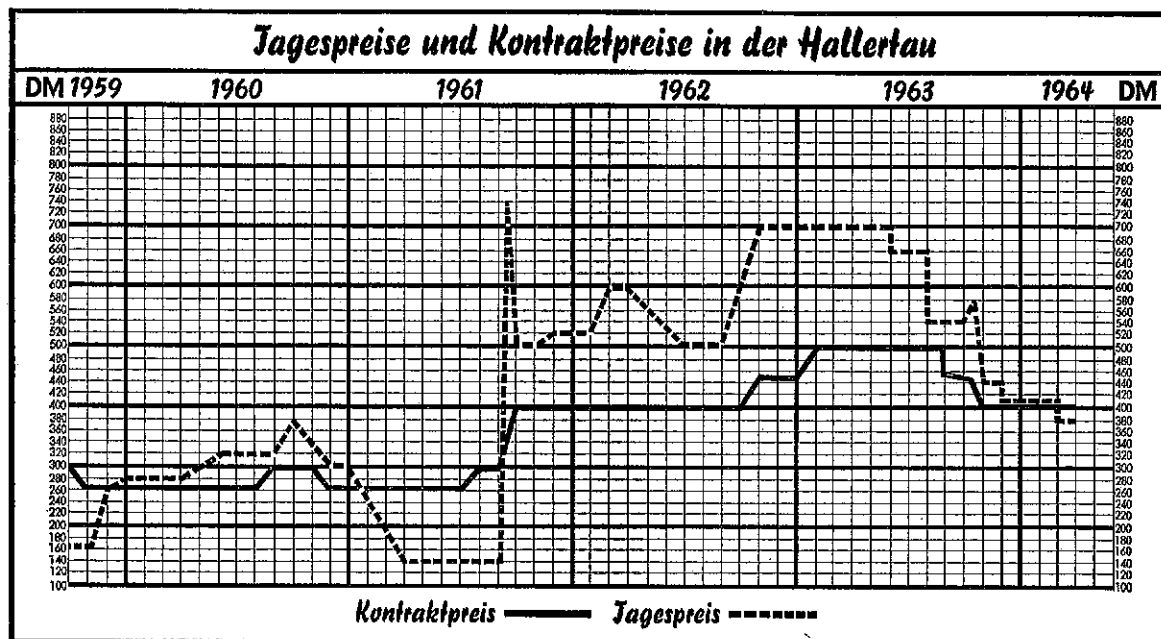
The crop of 1962 had practically resulted in complete cover for necessity on the world market. An increase of the world hop production over and above the rate of increase of demand which for several years amounted to about 50,000 cwts. per year had to lead to a changed situation on the world market. The increase of production amounting to about 150,000 cwts. originating especially in the U.S.A. as well as in Czechoslovakia and in Germany has resulted in this effect. Hop farmers, however, can be satisfied with prices for their hops. A great percentage of the world crop was under contract at satisfactory prices. Still available hops could generally be sold on a satisfactory basis. The incipient downward slide in prices had an effect only on smaller quantities of hops in some parts of the world market, especially in France and the U.S.A. Generally, the development of the hop season 1963/64 especially regarding the pricing situation and the supply of breweries, can be considered as a step to the normalizing of the hop market, especially as only minimal quantities of crop 1963 had remained unsold until the time of this report.

One fact of ever expanding importance for the world hop market is the increasing self-sufficiency in hops for several Eastern countries. In future, the export balance of hops of the traditional countries of production Czechoslovakia, Jugoslavia and Poland will have to look for markets more and more in Western Countries.

**Crop Volume and Percentage of Contracts in Germany and the Hallertau**



Trading in advance contracts for German hops has increased considerably during the several past years. There are no reliable figures available regarding the extent of contracts, but it may be presumed that as shown in the above table, about 80% of the expected crop in 1964 in the Hallertau will be under contract. The quantity of hops under contract is on the increase in all other districts of production as well. For this reason, it may be safely estimated that a total of 70% of the German crop 1964 is covered by advance contracts.



In the district of the Hallertau especially, the maximum quantity of possible contracts seems now to be reached. Each farmer maintains part of his crop for free disposition either to have a possibility to fulfill his contracts in case of a shorter crop, or on the other hand to have part of his crop available for sales on the free market.

A further increase of the contract volume, especially in the Hallertau but for the foreseeable future in other districts as well, will be possible only by an expansion of acreage. This development is already in its first stages in the Hallertau where new hop yards are generally planted only if the expected yield for the next coming years is covered by advance contracts. In this way, an automatic adjustment between acreage and effective demand becomes possible which will be a sound improvement for the market.

The quantity of hops handled by cooperatives in 1962 and 1963 has been computed as follows (crop 1962 estimated):

Cooperative	Quantities handled		Percentage of Crop 1963
	Crop 1962	Crop 1963	
Hallertau . . . . .	12,795 cwts.	15,748 cwts.	abt. 6.0%
Spalt . . . . .	3,445 cwts.	4,921 cwts.	abt. 13.7%
Tettwang . . . . .	2,461 cwts.	2,756 cwts.	abt. 9.3%
Hersbruck Gebirg . . . . .	984 cwts.	1,476 cwts.	abt. 9.0%
Wurttemberg . . . . .	1,083 cwts.	1,280 cwts.	abt. 39.3%
Jura . . . . .	394 cwts.	886 cwts.	abt. 11.7%
Total . . . . .	21,162 cwts.	27,067 cwts.	abt. 7.6%

**Farmers'  
Cooperatives  
in Germany**

Export of Hop Concentrates			
	Concentrates Total in lbs.	Percentage of Total	
		German Export	Export "in bond"
Year 1961 9/1/61 — 8/31/62	677,921	32,88 %	61,12 %
Year 1962 9/1/62 — 8/31/63	414,579	55,36 %	44,64 %
1963 (7 months) 9/1/63 — 3/31/64	397,493	22,74 %	77,26 %

**Exports of  
Hops as  
Hop Concentrate**

**German Hop Exports Crop 1963**

Export of German Hops Crop 1963					
September 1st, 1963 — March 31st, 1964					
Country	lbs.	lbs.	Country	lbs.	lbs.
Belgium-Luxembourg . . . . .	518,522		b. f. . . . .	132,054	9,098,823
Denmark . . . . .	279,323		Canary Islands . . . . .	40,785	
Finland . . . . .	194,225		Kenya-Uganda . . . . .	38,801	
France . . . . .	773,153		Congo . . . . .	11,023	
Great Britain . . . . .	148,590		Liberia . . . . .	4,409	
Ireland . . . . .	5,952		Lybia . . . . .	4,409	
Italy . . . . .	843,700		Madagascar . . . . .	11,023	
Malta . . . . .	4,189		Marocco . . . . .	33,069	
Netherlands . . . . .	294,755		Moçambique . . . . .	22,046	
Norway . . . . .	186,730		Nigeria . . . . .	45,635	
Austria . . . . .	782,413		Réunion . . . . .	2,425	
Portugal . . . . .	85,098		Rhodesia . . . . .	13,007	
Spain . . . . .	80,247		Sansibar . . . . .	9,921	
Sweden . . . . .	518,301		Senegal . . . . .	28,660	
Switzerland . . . . .	661,600		Sudan . . . . .	21,164	
<b>Europe</b> . . . . .		5,376,798	Republic of South Africa . . . . .	189,816	
Argentina . . . . .	55,115		Tunis . . . . .	11,023	
Bolivia . . . . .	8,377		Central Afric. Republic . . . . .	13,228	
Brazil . . . . .	179,454		<b>Africa</b> . . . . .		632,498
Canada . . . . .	121,914		Burma . . . . .	9,921	
Columbia . . . . .	66,579		Ceylon . . . . .	4,409	
Costa Rica . . . . .	4,409		Hongkong . . . . .	18,079	
French West Indies . . . . .	6,173		Indonesia . . . . .	9,921	
Mexico . . . . .	26,896		Iraq . . . . .	9,700	
Nicaragua . . . . .	6,614		Iran . . . . .	11,464	
Panama exc Canalzone . . . . .	2,646		Japan . . . . .	657,853	
Uruguay . . . . .	11,023		Lebanon . . . . .	11,023	
U.S.A. . . . .	3,221,141		Malayan States . . . . .	42,990	
West Indies . . . . .	11,684		Pakistan . . . . .	3,086	
<b>America</b> . . . . .		3,722,025	Philippine Isl. . . . .	169,754	
Ethiopia . . . . .	38,360		Singapore . . . . .	8,377	
Angola . . . . .	25,132		South-Korea . . . . .	2,205	
Dahomey . . . . .	19,841		Syria . . . . .	10,582	
Ivory Coast . . . . .	8,818		Thailand . . . . .	50,706	
Ghana . . . . .	28,660		<b>Asia</b> . . . . .		1,020,070
Cameroons . . . . .	11,243		Australia . . . . .	13,670	
o. f. . . . .	132,054	9,098,823	French Pacific Isl. . . . .	6,615	
			<b>Australia</b> . . . . .		20,285
			<b>Total</b> . . . . .		<u>10,771,676</u>

German hop exports crop 1962 until March 31st, 1963 = 10,208,621 lbs.

The following lots of hops have been imported from September 1st, 1963, to March 31st, 1964:

Belgium-Luxembourg . . . . .	944,451 lbs.	b. f. . . . .	2,609,585 lbs.
France . . . . .	414,906 lbs.	Czechoslovakia . . . . .	559,527 lbs.
Great Britain . . . . .	7,716 lbs.	U. S. A. . . . .	2,142,430 lbs.
Jugoslavia . . . . .	1,143,967 lbs.	Austria . . . . .	49,604 lbs.
Netherlands . . . . .	27,337 lbs.	Hungary . . . . .	6,614 lbs.
Poland . . . . .	71,208 lbs.		
c. f. . . . .	2,609,585 lbs.	<b>Total</b> . . . . .	<u>5,367,760 lbs.</u>

German hop imports crop 1962 until March 31st, 1963 = 4,806,028 lbs.

**RESTRAINT OF IMPORTS.** Regarding the imports of hops from **Jugoslavia** it has to be recorded that the restraint of imports was effected by the fourth decree changing the list of imports dated June 28th, 1962 (*Bundesanzeiger No. 121* June 30th, 1962). Subsequent to this, on July 14th, 1962, a notice was published according to which the imports of hops from Jugoslavia would be considered in case prices for Hallertau hops on farms would be under DM 400.—. This notice had no effect even for crop 1963.

The import of hops from **Czechoslovakia** conforms to the terms of the Trade Agreement which only states a total value. As a consequence of increasing prices for hops, the quantity available for imports has been almost reduced constantly. In consideration of this fact German authorities during the last years approved applications for the import of additional quantities. An application for a corresponding additional quantity, crop 1963, however, met with difficulties. The volume allowed corresponded only to about half of the open demand.

**IMPORT CONTRACTS.** By a publication No. 3/63 dated April 3rd, 1963, the *Zollwertgruppe Köln* recognized that for the import of hops, too, terms of delivery up to five years have become customary in the meantime. The approval of applications for import, however, meets with difficulties. The *Bundesministerium für Ernährung, Landwirtschaft und Forsten* continues to maintain that contracts for hops cannot be allowed for more than two years. It appears absolutely necessary for the Ministry too, to change this in conformity with the new situation developed on the hop market in the meantime.

**IMPORT DUTIES.** For the importer there is a possibility to protest against values or percentages of duty within one month (AO § 245). The custom authorities on the other hand are allowed to claim additional duties even on officially finalized duties (AO § 223) until the end of the term of limitation. This term starts on January 1st, following upon the month in which duties had been finalized, and ends on December 31st of the corresponding year (AO § 144 and 145). Whereas, therefore, authorities are allowed a term up to 24 months for additional claims, such a term is not allowed for the importer. The *Bundesfinanzhof* on December 7th, 1960 has decided that this is legal and binding (Publication VII/104/60/U. *Bundesgesetzblatt* 1961/Page 318).

European  
Economic  
Community  
(E.E.C.)

**ECONOMICAL SITUATION.** Trade within the E.E.C. has considerably increased in 1963. Deliveries from Germany to France expanded by about 20% and to Italy for about 32% as against 1962. Considering the commercial exchange with other countries, however, the deficit of the commercial balance of the E.E.C. in total has increased and is indicated for 1963 as amounting to about 11 billions DM. The balance of payment, however, remained favourable as a consequence of capital import.

**INTERNATIONAL CUSTOM DISCUSSIONS.** The authorities of the E.E.C. at Brussels are acting for all six member states during the current conference of the GATT (General Agreement of Tariffs and Trade) in Geneva. The discussions have not only the aim to decrease custom rates by 50%, but to regulate the trade in agricultural products as well. In this latter connection, rates of custom duty are not of primary importance, but in the first line the several regulations existing in all countries regarding contingents, licences of importation, marketing agreements etc. It is supposed that these discussions will become rather difficult.

**AGRICULTURAL MARKET.** A basic agreement was reached in Brussels on December 23rd, 1963. Therefore, the Council of Ministers of the E.E.C. was able on February 5th, 1964, to declare as effective a number of marketing agreements. These agreements refer to **Rice, Beef, Milk and Dairy Products**. These marketing agreements are expected to enter into force on July 1st, 1964. Discussions regarding an agreement to fix a uniform price for **Grain** within the E.E.C. could not yet be successfully terminated.

The German government has applied in 1962 in Brussels for the introduction of a marketing agreement for **Hops**. To a demand for information (No. IV/1205 dated April 25th, 1963) the *Bundesministerium für Ernährung, Landwirtschaft und Forsten* replied as follows on May 10th, 1963:

1. The examination of the application in Brussels has not yet been concluded.
2. The examination of existing and new marketing agreements regarding agriculture has to take precedence.
3. New efforts regarding the hop marketing agreement for the time being, do not seem recommendable.

**CUSTOM TARIFFS.** The custom tariffs for hops within the E.E.C. have developed as follows:

	Custom Duties for Imports from			Additional Import Taxes
	Members of the E.E.C. since July 1st, 1962	since July 1st, 1963	other countries since January 1st, 1962	
Belgium . . . . .	5.2%	4.4%	9.2%	12%
Germany . . . . .	9.5%	8.2%	13.5%	4%
France . . . . .	7.8%	6.6%	12.0%	11% + 3%
Italy . . . . .	2.4%	2.2%	6.4%	3.3% + 0.5%
Luxembourg . . . . .	5.2%	4.4%	9.2%	2%
Netherlands . . . . .	5.2%	4.4%	9.2%	5%

According to the above alterations, the percentage of duties for deliveries „in bond“ from other countries to be re-exported to members of the E.E.C. have developed as follows:

since January 1st, 1961 - 25% of the scheduled custom rate for other countries  
(12% for hops)

since January 1st, 1962 - 45% of 12%

since July 1st, 1963 - 55% of 12%

Further alterations of the rates of custom duties are to go into effect after December 31st, 1964, and December 31st, 1965.

Climatic conditions in 1963 were favourable for the development of the hops so that the vines could grow normally on the average. Local damages were experienced by **Drought** in the district of Magdeburg. Other districts suffered damages by **Hail** and **Storms**. Rainfalls from March to August 1963 were lower than normal. The average figures for the weather in the principal districts of production were as follows:

Deutsche  
Demokratische  
Republik  
(D.D.R.)

	March	April	May	June	July	August	Sept.
Precipitations	26	38	42	79	43	94	76 mm
Temperatures	2.1	8.4	12.6	16.3	18.6	16.9	14.1 <sup>0</sup> C

The hops reached the height of the trellises in the beginning of July and formed a strong overhang. On the average, three preventive sprayings against **Downy Mildew** were effected. Local damages were occasioned by Downy Mildew and **Red Spider**. In mid-July the hops were in **Bloom**.

**Picking** started around August 20th/25th and was mostly finished about September 11th under sometimes rainy weather conditions. 84 picking machines are available which handle about 60% of the crop. Some lack of labour prolonged the harvest until September 20th, which affected quality.

**Quality.** Hops crop 1963 had well closed cones of unequal size. As a consequence of the sunny weather, the quality was better than the year before. The hops were graded as follows: Grade II 4.2%, Grade III 70.5%, Grade IV 24.3%, Grade V 1.0%. The entire crop was taken over by the brewing industry. Prices for producers were unchanged against the year before.

**Poland**

The year 1963 brought less precipitations than the rainy year before. Weather data were as follows:

	March	April	May	June	July	August	Sept.
Precipitations	19.5	56.6	50.1	20.5	47.2	25.1	55.3 mm
Temperatures	-7	+1.4	4.5	7.9	9.6	10.6	7.0° C

Climatic conditions during the growing season 1963 were favourable for the development of the hops as well as for the harvest. Strong **Frosts** around the new year 1962/63 caused no damage. Hops already cut during the autumn of 1962 wintered well. The dry and warm weather in April and at the beginning of May facilitated **Spring Work**. The warm weather served also to equalize the somewhat retarded development of the plants during the spring. Sufficient rainfalls in June and warm weather in July resulted in a quick and luxuriant development of the vines. The weather continued favourable in August, which improved the **Ripening** of the hops.

Occasional appearances of **Downy Mildew** were controlled as well as **Pests**, especially **Red Spider**. The plants reached the height of the trellises by the end of June and were in bloom during July. Growth was satisfactory and the vines showed many **Laterals**. The **Harvest** started in mid-August and was quickly finished. There were sufficient pickers available. There are only 4 picking machines operating on a trial basis.

**Quality** on the average was judged better than the year before. The cones had a uniform yellowish-green colour. The hops were graded as follows: Grade I 25%, Grade II 74.3%, Grade III 0.7%. The entire crop was sold until the end of December 1963 at fixed prices. The acreage is distributed as follows: Private farmers 55.1%, Cooperatives 5.5%, State farms 39.4%.

**Czechoslovakia**

The hops had wintered well. Favourable weather conditions resulted in a good growth of the hops, but **Hail** occasioned local damages in May 1963. Precipitations were distributed as follows:

	April	May	June	July	August	Sept.
Saaz	20.6	56.8	65.2	53.8	36.1	29.2 mm
Auscha	29.4	69.1	130.4	49.7	69.5	64.8 mm

The favourable warm weather continued until the end of June/beginning of July. At that time, the plants had reached the height of the trellises. Welcome rainfalls benefited growth and warmer weather during the second half of July 1963 was favourable for the development of **Bloom**. All indications pointed to a normal crop and the **Formation** of the **Cones** in August was satisfactory.

Shortly before the harvest, **Heavy Storms** occasioned serious damages to about 1,236 acres in the district of Saaz. Five to six sprayings were effected against **Pests** and **Diseases**.

**Picking** started on August 18th and was finished on September 5th. 170 picking machines were in operation of which some, however, were not used to full capacity.

**Quality.** The cones of the Saaz hops, crop 1963 were of somewhat greater size than normal and of uniform green colour with occasional wind whipping. The crop was graded as follows: Grade I 78%, Grade II 21.5%, Grade III 0.5%.

The entire crop was handled centrally at fixed prices. A quantity of 110,000 cwts. was reserved for export. The home brewing industry received 88,000 cwts. and furthermore 18,000 cwts. of hops, crop 1963 were imported.

**Hungary**

Hop production in Hungary, which continues to be based on a total acreage of 1,730 acres resulted in a relatively small crop in 1963. Hop yards are planted to the following varieties: Saaz, Tettngang, Alsace (Striesselspalter) and Goldings. Weather conditions in 1963 were not especially favourable and influenced the several varieties in different ways.

After a late spring in 1963 there were noted only small damages by **Frosts**. A dry summer followed. Hop yards are localized in different districts of the country and for this reason only an approximate information regarding precipitations in 1963 can be given as follows:

March	April	May	June	July	August	Sept.
30.2	14.6	20.5	55.5	48.6	53.9	69.0 mm

As a consequence of the generally dry summer, especially the varieties Saaz and Tett- nang could not reach the height of the trellises and their relatively short **Laterals** showed only a few and not well developed cones. Weather conditions were more favourable for the vegetative development of the Alsace and Golding varieties, but here, too, dryness hampered the **Formation of the Cones**. In addition, **Storms** and continued rainfalls by the end of August/beginning of September 1963 damaged the hop yards so much that occasionally even the trellises collapsed. During this time, **Downy Mildew** occasioned additional losses although sprayings against **Pests and Diseases** had been effected up to four or five times for Saaz and Tett- nang varieties and up to ten times for 'Alsace and Golding hops. Considerable damages, too, were occasioned by a strong infestation of **Nematodes** (*Ditylenchum destructor*) which made imparative the ploughing out of about 100 acres of hop yards. A corresponding acreage has been newly planted to hops in the meantime.

Saaz and Tett- nang varieties reached the height of the trellises only partially by mid- June whereas Alsace and Golding hops reached the height of the trellises by the end of June. The early varieties showed an unequal **Bloom** by the end of May/beginning of June, whereas late varieties started to bloom in mid- July.

The **Picking** of early hops started at the beginning of August and was drawn out for reason of lack of labour in several places until the end of August. Alsace and Golding varieties were picked at the end of August. The harvest was finished on September 15th and there was lack of labour. Three hop picking machines were installed somewhat late so that these machines could do only some experimental work. The harvest was favoured by weather conditions in August, later on, however, hampered by repeated strong rainfalls.

As a consequence of dry weather conditions, the hops generally had unequal and not well formed cones. The colour was not uniform. The crop was graded as follows: 27.7% Grade I, 32.3% Grade II, 40% Grade III. The total acreage of 1,730 acres (of which 100 acres new hop yards), gave a crop of 7,767 cwts. (495 lbs. per acre). The entire crop was purchased by the home breweries. A total quantity of 4,900 cwts. of hops crop 1963 had to be imported to cover demand. All hops are handled centrally. 98% of the hop yards are public property whereas 2% are worked by cooperatives. Private farmers do not produce hops in Hungary.

In the **SANNTAL (SLOVENIA)** hop yards had been protected by an extensive snow cover so that the plants wintered well despite the long and cold winter. **Spring Work** was retarded by reason of ample precipitations in March and April 1963. Temperatures and precipitations were as follows:

Jugoslavia

	March	April	May	June	July	August	Sept.
Precipitations	63.8	64.7	100.5	98.9	80.6	266.8	113.1 mm
Temperatures	3.6	10.9	14.5	19.0	20.7	19.5	16.5° C

Subsoil moisture was sufficient so that the hops could develop well under sunny and warm weather until the beginning of July. The vines had reached the height of the trellises by the end of June and showed a good overhang. Hop yards were in **Full Bloom** in mid- July. Five sprayings had been effected against pests and diseases.

The favourable crop prospects, however, were diminished by a dry spell since the beginning of July until the harvest in mid- August 1963. Hop yards on lighter soils suffered especially from the lack of rain.

**Picking** started on August 15th and was finished until the end of that month under very rainy weather. As a consequence of weather conditions, cones were of rather unequal size, but corresponded both in quality and colour to last year's harvest. Crop 1963 was graded as follows: 94.3% Grade I, 5.2% Grade II, 0.5% Grade III. The harvest was sold out quickly. The home industry received 4,620 cwts. whereas 51,560 cwts. were exported.

**BACKA.** Rainfalls were distributed as follows:

	March	April	May	June	July	August	Sept.
Precipitations	20	22	49	51	36	45	43 mm
Temperatures	4.0	12.3	16.8	21.2	22.4	22.2	17.7° C

The winter 1962/63 was not too severe, and the plants came well out of dormancy with no frost damage. During May and June 1963, however, damages were caused by **Strong Winds** from the South- East. The hops reached the height of the trellises at the beginning of June and were in **Bloom** at the end of July. The vines showed especially good growth on the upper part and cones ripened on the lower third of the vines as well. Bad weather conditions in August caused considerable damage which resulted in a **Loss** of 10% of the crop. These conditions prevailed especially in the district of Backa Palanka which is situated along the Danube. **Picking** started on August 27th and was finished on September 12th under good weather conditions. The entire harvest is done by hand and there were not always sufficient pickers available.

**Quality.** The cones of Backa hops crop 1963 were of good colour but had less lupulin than the year before. The crop was graded as follows: 61.5% Grade I, 37.5% Grade II, 1% Grade III.

A further expansion of acreage in the Backa is planned for the spring of 1964, amounting to about 250 acres. The total harvest is handled centrally. The decrease of crop 1963 by bad weather conditions in August was set off by imports of hops from the U.S.A. and Poland during the spring of 1964. All export contracts for Backa hops crop 1963 were fulfilled. Of the total acreage in the Backa abt. 18% are in the hands of private farmers whereas 82% are in the possession of cooperatives. Prices to farmers were as follows (Dinar 100 = DM —.55).

Grade I Din 1,578.— per kilo (DM 435.— per 50 kilos)  
 Grade II Din 1,496.— per kilo (DM 410.— per 50 kilos)  
 Grade III Din 984.— per kilo (DM 270.— per 50 kilos).

No exact details are in hand regarding a new district of production which is said to exist in **Croatia**.

The following details are now available regarding hop exports from Jugoslavia, crop 1960 and 1961:

Hop Exports from Jugoslavia 1960/61 and 1961/62					
between October 1st and September 30th					
Country	1960/61 lbs.	1961/62 lbs.	Country	1960/61 lbs.	1961/62 lbs.
Egypt . . . . .	45,415	38,580	b. f. . . . .	5,407,223	5,185,439
Algiers . . . . .	121,253	97,443	Italy . . . . .	17,637	44,092
Australia . . . . .	179,234	182,100	Cameroon . . . . .	—	35,274
Belgium-Luxembourg . . . . .	385,805	690,481	Malayan States . . . . .	—	6,614
Brazil . . . . .	305,117	50,706	Marocco . . . . .	65,036	66,138
Bulgaria . . . . .	28,660	66,138	Netherlands . . . . .	514,995	583,778
Denmark . . . . .	144,181	196,210	Norway . . . . .	2,205	—
Dahomey . . . . .	—	15,432	Roumania . . . . .	70,547	22,046
Germany East . . . . .	634,925	—	Senegal . . . . .	—	11,023
Germany West . . . . .	1,631,845	2,170,649	Spain . . . . .	—	165,345
Ivory Coast . . . . .	50,706	63,933	Sweden . . . . .	15,432	50,706
Finland . . . . .	6,614	19,841	Switzerland . . . . .	229,278	205,689
France . . . . .	465,832	448,636	Czechoslovakia . . . . .	257,938	—
French West-Africa . . . . .	11,023	—	Turkey . . . . .	110,230	—
Great Britain . . . . .	1,352,522	1,074,743	Tunis . . . . .	22,046	22,046
Guinea . . . . .	—	2,204	USSR . . . . .	2,667,566	—
Iraq . . . . .	2,204	—	Hungary . . . . .	419,094	132,276
Iran . . . . .	22,046	39,683	U. S. A. . . . .	3,428,153	2,605,837
Israel . . . . .	19,841	28,660	Other Countries . . . . .	8,818	15,432
c. f. . . . .	5,407,223	5,185,439	Total . . . . .	13,236,198	9,151,735

**Bulgaria**

Publications in newspapers inform that hop cultivation which began in 1949 has now been expanded to an acreage of abt. 3,000 acres. These plantings are situated in the Foothills of the Rila Range, on the plain Staréplanina and in the district of Samokov, Sofia, Tornovo, Kolarovgrad, Durgar, Pazardzik and Velingrad. A harvest of 8,400 cwts. is indicated for crop 1963, which covers the demand of the Bulgarian brewing industry. 80% of the acreage are on state farms whereas 20% are cultivated by cooperatives.

Hop yards are provided with trellises on concrete poles, and cultivation is mostly done with the help of tractors. The hills are planted at a distance of 200 by 120 cm. Suitable varieties were selected from the many varieties originally imported. Hop yards are planted to early, middling and late varieties which facilitates the work at harvest time.

Yields are indicated as between 530 and 620 lbs. per acre (except new plantings). Lack of precipitation and intense dryness during the summer restricted yields. Work has started to irrigate hop yards two or three times during the summer in order to increase yields by 50%.

Varieties planted are Sanntal, Hallertau and Groene Bel. About one third of the acreage is planted to Wurttemberg and Alsace Varieties (Striesselspalter).

**Belgium**

In the district of **ALOST** the hops came well through the long and cold winter 1962/63. Growth was retarded under cool and wet weather in April and May and pests and diseases had to be carefully controlled by sprayings, which were repeated sometimes every 10 days.

More favourable weather conditions in June and July with welcome rainfalls benefited growth. The hops reached the height of the trellises in mid-July but the growth was not too luxuriant. Favourable weather conditions were changed on August 10th to cool and rainy weather, which prevailed until September 10th.

**Picking** started about September 1st and was mostly finished by September 18th. Weather conditions were favourable only during the second half of the harvest. About 80% of the hops are handled by picking machines and there was no lack of labour.

The **Formation** of the **Cones** as well as the **Ripening** of the hops was hampered by weather conditions. Cones were of unequal size, generally of light green, sometimes yellowish-green colour and occasionally off-colour. The crop was graded as follows: 50% Grade I, 30% Grade II, 20% Grade III.



Prices for the variety Replant Hallertau on farms remained stable almost over the whole season at bfrs. 4,500.— Only during the first half of October a passing increase to bfrs. 5,000.— was noted. The district was sold out by the end of 1963.

**POPERINGHE.** The winter of 1962/63 brought **Frost** until the beginning of March. **Spring Work** was starting only by the end of March but was favoured by mild weather in April. The plants were off to a slow start under cool weather until the end of May. At that time, **Downy Mildew** appeared locally. Spraying against this disease were effected practically every week and the same had to be done against **Aphids**, which appeared at the beginning of June. More favourable weather during the first half of June was followed by cool and windy conditions. Rainfalls were distributed as follows:

March	April	May	June	July	August	Sept.
37	59.3	42.4	67	68.8	86.8	66.1 mm

Early varieties reached the height of the trellises about July 7th, whereas other varieties were only a few days later. **Bloom** started in mid-July and the hops were in full bloom by the end of that month. Expectations for a great harvest, however, were not realized. The weather in August was generally cool and rainy which hampered both the **Formation** of the **Cones** and the **Ripening** of the hops.

Control of pests was not always successful which resulted in local damages of the hops during bloom and even still during the harvest.

**Picking** started sporadically on August 30th, was in full swing on September 2nd and mostly finished on September 15th, whereas the harvest of late varieties was extended until September 28th. About 95 picking machines and two big kilns are available.

The colour of the hops was not so uniform as the year before. The crop was graded as follows: 65% Grade I, 25% Grade II, 10% Grade III.

Quotations for the variety Replant Hallertau started at bfrs. 4,500.— at the beginning of September, fell to bfrs. 4,000.— by mid-September, but stood at bfrs. 5,000.— at the beginning of October and were at bfrs. 4,500.— once again at the beginning of November. Quotations for other varieties corresponded to this development. The district was sold out with the exception of small remaining lots by the end of 1963.

**LAW OF PROVENIENCE.** A control of the provenience as well as the quality and the handling of the hops has been established by a decree dated July 19th, 1963 published in the "Moniteur" dated August 13th, 1963.

Belgium imported the following quantities of hops crop 1963 from September 1st, 1963, until January 31st, 1964:

	lbs.		lbs.
Germany West . . . . .	448,416	b. f. . . . .	1,036,162
France . . . . .	242,947	Great Britain . . . . .	138,890
Netherlands . . . . .	4,409	Czechoslovakia . . . . .	1,173,509
U. S. A. . . . .	281,748	Jugoslavia . . . . .	266,977
Poland . . . . .	58,642	Total . . . . .	2,615,538
c. f. . . . .	1,036,162		

Belgian hop imports crop 1962 until January 31st, 1963 = 3,381,856 lbs.

Export of Belgian hops from September 1st, 1963, until January 31st, 1964 are shown as follows:

	lbs.		lbs.
Angola . . . . .	5,512	b. f. . . . .	1,103,843
Brazil . . . . .	4,409	Netherlands . . . . .	177,691
Denmark . . . . .	69,886	Norway . . . . .	2,866
Germany West . . . . .	783,735	Austria . . . . .	122,355
Finland . . . . .	18,739	Pakistan . . . . .	1,323
France . . . . .	12,125	Portugal . . . . .	1,764
Great Britain . . . . .	161,818	Rhodesia and Nyassaland . . . . .	11,023
Ireland . . . . .	24,251	Ruanda-Burundi . . . . .	5,512
Israel . . . . .	7,716	Sweden . . . . .	42,549
Italy . . . . .	661	Switzerland . . . . .	74,956
Japan . . . . .	8,818	Un. of South Africa . . . . .	11,023
Kenya and Uganda . . . . .	2,866	U. S. A. . . . .	132,717
Congo (Brazzav.) . . . . .	2,205	West-India . . . . .	1,102
Congo (Leopoldv.) . . . . .	1,102	Total . . . . .	1,688,724
c. f. . . . .	1,103,843		

Belgian hop exports crop 1962 until January 31st, 1963 = 1,946,662 lbs.

Precipitations in France were distributed as follows:

	March	April	May	June	July	August	Sept.
Alsace	31.9	38.3	26.7	90.3	52.6	151.5	46.9 mm
North	48	25	51	98	33	81	127 mm

In the **ALSACE** the hops had wintered well. Warmer weather arrived in mid-March and **Spring Work** could be started at the beginning of April. The young shoots could develop well under warmer even if somewhat dry weather in April. Spraying against **Downy Mildew** were effected already in mid-May.

France

The growth of the hops could develop well under warm weather in May, but hop yards showed the influence of dryness. Necessary precipitations arrived in June. The vines made healthy progress and had numerous **Laterals**. This development continued under favourable weather until mid-July. At this time, first bloom appeared and hop yards were in **Full Bloom** during the last week of July. The hops had reached the height of the trellises around July 10th and formed a good overhang. Careful control of **Pests** was necessary, especially during the dry and warm spell from mid-July until the beginning of August.

Strong rainfalls started at the beginning of August and continued until harvest time, which hampered both the **Formation of the Cones** as well as the **Ripening** of the hops.

**Picking** started at the beginning of September and was finished at the beginning of October under good and dry weather conditions. There are about 130 picking machines in operation. The Alsace hops, crop 1963 were of good green colour but had larger sized cones than the year before. Contents of lupulin was insufficient. The crop was graded as follows: 90% Grade I, 7% Grade II, 3% Grade III.

In contrast to former years, the sale of the crop suffered from considerable difficulties. Prices on Farms were on the downgrade from Fr. 450.— to Fr. 350.—. It was not always easy to fix an exact price for Alsace hops considering the complicated conditions of purchase in this district. Part of the hops estimated at about 3/4,000 cwts. remained unsold mostly in second hands at the time of the conclusion of this report.

**FLANDRES.** The hop yards had wintered well despite temperatures as low as —15° C during the winter of 1962/63. **Spring Work** could be finished in good time on the average despite **Frost** until —5° C appearing still until the month of May 1963. During the months of April and May, however, there were warm temperatures as well, so that the plants could make a good growth.

Up to 17 dustings were effected against **Pests** and **Diseases**. Early uncovered hop yards showed less incidence of **Downy Mildew**. An especially heavy infestation of pests during the second half of July was effectively controlled. **Verticillium Wilt** was noted only in small traces on the variety Replant Hallertau.

Temperatures were lower in June as a consequence of heavy precipitations, but the weather became warmer once again in July and August. The hops reached the height of the trellises during the second half of June and were in **Full Bloom** by mid-July. The vines had remained pointed, but showed a good growth on the middle part.

**Picking** started on September 2nd, and was finished including late varieties by the end of September under favourable weather conditions. 80% of the harvest are handled by 20 picking machines.

The crop 1963 could not be considered especially good as a consequence of low alpha contents. The crop was graded as follows: 10% Grade I, 90% Grade II.

Prices for the variety Replant Hallertau started with Fr. 400.— at the beginning of September and remained on this basis during the entire season. Final lots were taken out of the market in November at Fr. 350.—. The crop was entirely sold out with the exception of small remaining lots until the end of December 1963.

**SUBSIDIES FOR EXPORT.** Considering the considerable unsold stocks, especially in the Alsace which could be sold only on the export market, the government of France provided means for subsidising the export. It was intended to pay a premium of Fr. 80.— per cwt. for a total quantity of 10,000 cwts. In the meantime, however, hop farmers as well as dealers have approached the authorities to obtain a premium of Fr. 80.— per cwt. for a total of 20,000 cwts.

**MARKETING AGREEMENT.** Efforts to establish a marketing agreement were under way in France already some time ago. Discussions with the Agricultural Ministry of France had taken place in which representatives of breweries, hop merchants as well as hop planters from the districts of Flandres, Côte d'Or and the Alsace (free farmers and Cooperatives) have taken part. It is intended to establish a pricing regulation for the coming crop 1964 in the following way:

**Purchase on farms:** Fr. 455.—/510.— per 50 kilos net  
**Sales to breweries:** Fr. 545.—/600.— per 50 kilos net.

Furthermore it is intended to establish a marketing board with five representatives each from breweries, merchants and farmers. This board will have to observe the market development and to submit proposals for the further implementing of the marketing agreement.

In 1963 France imported:

Countries	Jan.—June lbs.	July—Dec. lbs.	1963 Total lbs.
Belgium-Luxembourg . . . . .	36,596	661	37,257
Germany West . . . . .	186,950	661,160	848,110
Jugoslavia . . . . .	439,377	—	439,377
Czechoslovakia . . . . .	319,667	363,980	683,647
U. S. A. . . . .	33,289	265,875	299,164
Total . . . . .	1,015,879	1,291,676	2,307,555

French hop imports for the calendar year 1962 = 3,157,428 lbs.

Export of French hops in 1963 were as follows:

Destination	Jan.—June lbs.	July—Dec. lbs.	1963 Total lbs.
Algiers . . . . .	4,409	882	5,291
Belgium-Luxembourg . . . . .	93,916	303,133	397,049
Denmark . . . . .	—	34,392	34,392
Germany West . . . . .	255,734	224,869	480,603
Ivory Coast . . . . .	1,764	2,425	4,189
Great Britain . . . . .	—	4,850	4,850
Guadeloupe . . . . .	441	441	882
Italy . . . . .	31,967	—	31,967
Cameroons . . . . .	34,171	10,803	44,974
Martinique . . . . .	1,102	661	1,763
New Caledonia . . . . .	1,102	—	1,102
Netherlands . . . . .	—	11,023	11,023
Austria . . . . .	—	3,307	3,307
Sansibar . . . . .	—	6,834	6,834
Switzerland . . . . .	54,233	—	54,233
Tunisia . . . . .	—	6,614	6,614
Vietnam . . . . .	235,892	—	235,892
Central Africa . . . . .	5,952	—	5,952
Total . . . . .	720,683	610,234	1,330,917

French hop exports for the calendar year 1962 = 1,096,789 lbs.

**MUHLVIERTEL.** In this district, **Spring Work** was retarded by the long and severe winter 1962/63 and could be finished only in mid-April. The hops had come well out of dormancy and could show good development under generally favourable weather conditions. Up to eleven sprayings were effected against pests and diseases.

**Austria**

The plants reached the height of the trellises about the end of June. The constant good weather, which was only occasionally interrupted by wind and rain benefited the growth so that the vines showed a good overhang. The hops were in **Bloom** during the middle of July. Sunny weather benefited both the **Formation** of the **Cones** and the **Ripening** of the hops. **Picking** which is still done exclusively by hand started on August 26th and was finished on September 10th, under somewhat changeable weather conditions. The hops of crop 1963 corresponded in colour and quality to last year's crop. The cones, however, were somewhat greater and stronger. The crop was graded as follows: 87% Grade I, 9.5% Grade II, 3.5% Grade III. On a total acreage of 121 acres, a harvest of 173,100 lbs. was brought in (1,430 lbs. per acre). The entire crop was taken over by sponsoring breweries until the middle of December.

**LEUTSCHACH.** The weather in 1963 was favourable for the hops. Precipitations were distributed as follows:

March	April	May	June	July	August	Sept.
73.3	43.7	122.8	133.2	145.5	244.8	119.9 mm

At the start of growth, warm weather benefited the hops especially in March and April. Heavy rainfalls during the following months which increased up to 61.8 mm at the beginning of July hampered the cultivation of the hop yards, but the plants did not suffer. On the average, 10 to 12 sprayings were effected against pests and diseases.

The vines reached the height of the trellises at the beginning of July but did only form a small overhang. **Bloom** started about July 10th. **Picking** began on August 24th and was finished on September 10th, under only occasional rainfalls. 7 picking machines handled about 60% of the harvest. For the rest, there were not always sufficient pickers available.

The hops of crop 1963 were judged considerable better both in quality and formation of the cones, than the year before. A total of 177,250 lbs. was harvested on a total area of 152 acres (of which 10 acres new plantings) which corresponded to a yield of 1,166 lbs. per acre. The crop was graded as follows: 87% Grade I and II, 13% Grade III. The entire crop was taken over by sponsoring breweries in a price bracket of Austrian shillings 50/55.— per kilo (DM 385.—/425.— per 50 kilos).

Cold weather until the beginning of April resulted in a retarded growth of new shoots. The development was somewhat better in May under higher temperatures despite insufficient rainfalls. Extensive precipitations in June resulted in good growing conditions until the harvest. Up to ten sprayings were effected against **Pests** and **Diseases**. Precipitations were distributed as follows:

**Switzerland**

Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
32.4	46.8	88.0	46.8	67.5	156.5	48.2	113.9	66.8	49.1	100.3	0.6 mm

The vines reached the height of the trellises at the beginning of July and were in **Full Bloom** about July 20th. The plants had formed a strong overhang, but there were no cones on the lower third of the vines.

**Picking** started on August 23rd and was finished on September 13th with occasional interruptions by rain. There is no lack of labour as 94% of the crop is handled by one picking machine. A total quantity of 36,376 lbs. was harvested on an acreage of 30 acres (1,213 lbs. per acre). Prices were determined on September 28th as follows:

	<b>Grade I (95% of the crop)</b>	<b>Grade II (5% of the crop)</b>
Price to farmers	Fr. 560.— per 50 kilos	Fr. 540.— per 50 kilos
Share to Compensation Fund	Fr. 90.— per 50 kilos	Fr. 90.— per 50 kilos
Price to breweries	Fr. 650.— per 50 kilos	Fr. 630.— per 50 kilos

#### Greece

The area of production has been indicated as 42 acres in 1963 which brought a crop of 59,524 lbs. (1,417 lbs. per acre). The producing area is to be expanded to 74 acres in 1964. Generally an average yield of 1,785 lbs. per acre is expected. As demand by breweries is amply covered by production there remains a margin of hops which have been exported.

#### Spain

The development of the plants went on under favourable weather conditions in 1963. There were practically no pests or diseases with the exception of occasional infections by **Downy Mildew** in Galicia and Asturias. Production of hops in 1963 was as follows:

District	Acreage acres	Crop lbs.	Yield per acre lbs.
Galicia . . . . .	583	527,230	904
León . . . . .	1,858	1,789,364	963
Asturias . . . . .	405	259,812	642
Total . . . . .	2,846	2,576,406	905

The quality of the hops crop 1963 in all districts of Spain was better than the year before. The crop was graded as follows: 65% Grade I, 33% Grade II, 2% Grade III.

#### England

The necessary works in hop yards could be finished during the autumn of 1962 under good weather conditions. The winter was long and cold. **Spring Work** was somewhat retarded but the hops could develop well under favourable weather conditions. Welcome rainfalls by the end of June/beginning of July 1963 increased crop prospects. There was, however, a lack of necessary warmth and sunshine for the **Formation** of the **Cones** and the **Ripening** of the hops during July and August. Late varieties could still benefit from warmer weather in September.

Pests and diseases had to be controlled with special care. The sprayings against **Downy Mildew** were effected regularly at least every 3 weeks, whereas **Aphids** were controlled by systemic solutions.

The hops reached the height of the trellises at the beginning of July and were in **Full Bloom** by the end of July/beginning of August. The overhang was not especially luxurious.

**Picking** started sporadically on September 4th, was in full swing on September 11th, and finished by the end of September/beginning of October. The basic quota for farmers had been indicated at 110.5%. Part of the crop especially varieties less in demand remained unpicked. About 90% of the crop was handled by picking machines.

The great harvest was not especially satisfactory regarding quality. The aroma was weaker than usual and bitter values were lower than accustomed. Cones were smaller than normal and showed less lupulin. The crop was graded as follows: 23% Grade I, 69% Grade II, 8% Grade III. The harvest was sold out by the end of March 1963 with the exception of a final stock of about 1,000 cwts.

The average price to farmers was fixed at £ 31.10.— per cwt. (DM 345.— per 50 kilos). It cannot be longer maintained that machine picking might be a reason for hops which are not cleanly picked. Corresponding lower grades in quality for such reason result now in price deductions up to £ 4.— per cwt. (DM 45.— per 50 kilos).

All contracts for crop 1963 were entirely fulfilled. Demand for the coming crop 1964 has been estimated at 218,000 cwts. On the other hand 11,500 cwts. have been scheduled for imports of hops crop 1964.

The following quantities of hops crop 1963 were imported from September 1st, 1963, to March 31st, 1964:

Country	cwts.	Country	cwts.
Germany West . . . . .	1,798	b. f. . . . .	8,895
Belgium . . . . .	1,419	Poland . . . . .	397
U. S. A. . . . .	277	Canada . . . . .	231
Netherlands . . . . .	242	Switzerland . . . . .	48
Jugoslavia . . . . .	4,740	France . . . . .	36
Czechoslovakia . . . . .	417	Denmark . . . . .	64
Hungary . . . . .	2	Total . . . . .	9,671
c. f. . . . .	8,895	1 cwt. = 50.8 kg	

English Imports of hops crop 1962 = 14,230 cwts.

## Exports of English Hops Crop 1963

September 1st, 1963 — March 31st, 1964

Country	cwts.	Country	cwts.
Angola . . . . .	10	b. f. . . . .	17,510
Australia . . . . .	6	Malayan States . . . . .	413
Belgium . . . . .	1,860	Malta . . . . .	197
Brit. Guayana . . . . .	20	Netherlands . . . . .	89
Burma . . . . .	70	Nigeria . . . . .	516
Denmark . . . . .	28	Pacif.-Islands . . . . .	1
Germany W. . . . .	171	Portugal . . . . .	138
Fiji Islands . . . . .	10	Singapore . . . . .	313
Finland . . . . .	11	Southafric. Republ. . . . .	270
France . . . . .	10	Tanganyika . . . . .	100
Iraq . . . . .	31	U. S. A. . . . .	10
Ireland . . . . .	15,283	Total . . . . .	19,557
c. f. . . . .	17,510	1 cwt. = 50.8 kg	

English exports of hops crop 1962 = 19,811 cwts.

**CALIFORNIA.** In the spring of 1963, the weather was exceptionally cool in the district of **Sacramento**. The first development of the hops was unequal and retarded. Infestation by **Red Spider** and **Aphids** was scarcely notable. Precipitations were distributed as follows:

U. S. A.

April	May	June	July	Aug.	Sept.
3.43	0.64	0.22	—	—	0.35 inch.

The hops could develop well under favourable weather during the summer. Only three or four sprayings were necessary against pests and diseases. The vines reached the height of the trellises by the end of June and were in **Bloom** at the beginning of July. The plants formed a very good overhang and the cones on the lower third of the vines ripened. **Picking** started somewhat delayed around August 20th, and was finished around September 7th. The weather during the harvest was exceptionally cool.

The quality of the hops was judged better than the year before both in colour and in lupulin. The crop was graded as follows: 80% Grade I, 15% Grade II, 5% Grade III.

**WESTERN OREGON.** In this district hops were off to a slow start during the spring of 1963 as the weather was rather cool and humid. The entire growth during the springtime was retarded. Rainfalls were distributed as follows:

April	May	June	July	Aug.	Sept.
4.07	3.70	0.85	0.91	0.09	1.41 inch.

The weather was cooler than customary even during the summer of 1963. Under these conditions it was not necessary to spray more often than one or two times against **Pests** and **Diseases**. The hops reached the height of the trellises by the end of June and were in **Full Bloom** by the end of July. The vines had not grown so well as in other years under warmer weather but the cones could ripen well in the usual way. Despite the somewhat retarded growth, the harvest could be done within the customary dates. Fuggles were picked beginning in mid-August whereas the crop of Clusters and other varieties started at the beginning of September. Picking was finished around September 20th under good weather conditions with only one interruption by rain. The quality of the hops was generally judged equal to last year, but surprisingly contents of lupulin was higher than the year before. The crop was graded as follows: 45% Grade I, 40% Grade II, 15% Grade III.

**EASTERN OREGON and IDAHO.** The development of the hops was hampered by **Storms** during the spring of 1963 but no great damages resulted. **Downy Mildew** appeared sometimes heavily in isolated hop yards and the control of **Red Spider** and **Aphids** had to be effected locally with special care. Rainfalls were as follows:

April	May	June	July	Aug.	Sept.
1.65	0.85	1.90	—	0.64	0.75 inch.

The vines could grow well during the summer under average good weather conditions. Up to seven sprayings were effected against **Downy Mildew** and sprayings against **Pests** had to be effected at least two times and in part up to four times. The hops reached the height of the trellises around June 20th. Early Clusters showed first **Bloom** at the same time whereas late Clusters started to bloom around July 10th. The vines had formed a good overhang and the cones ripened uniformly over the entire length of the plants. **Picking** started on August 19th, and was finished on September 24th. Whereas in other districts generally there was sufficient labour available for the picking machines, there were sometimes scarcely enough men available in Idaho and Eastern Oregon. The weather during the harvest was especially good. The hops of crop 1963 were judged equal to the year before in all aspects. The crop was graded as follows: 65% Grade I, 25% Grade II, 10% Grade III.

**WASHINGTON.** In the district of **Yakima** there appeared no frost damages when the hops were uncovered and cut. The weather during the spring was cold and rainfalls were stronger than customary. This retarded field work in the hop yards and the plants were off to a slow start. Precipitations were as follows:

April	May	June	July	Aug.	Sept.
1.62	0.43	0.26	0.69	0.13	0.08 inch.

The rainy weather until mid-May caused some anxiety regarding a possible infection of **Downy Mildew**. The situation, however, improved under warmer and dryer weather. Preventive sprayings were carefully effected. During April, May and June the hops were sprayed practically every week, at least every 10 days. **Aphids** were of less importance but almost all farmers had difficulties with the control of **Red Spider** against which up to six sprayings had to be applied. The weather remained cooler than normal in June and July as well and strong **Winds** occasioned local damages. It is, however, supposed that the cooler weather in July and the especially warm weather in August stimulated the vegetative development so that a greater crop than estimated could be gathered into the barns. The hops reached the height of the trellises about July 20th/25th. The vines in carefully cultivated gardens generally formed some overhang. **Picking** started around August 25th and was practically finished around September 20th under excellent weather conditions.

The quality of the hops was judged better than the year before and it was especially noted that the bitter value of the hops was higher than the year before. The crop was graded as follows: 35% Grade I, 45% Grade II, 20% Grade III.

**Hop Market  
U. S. A.**

Contracts for the always relatively attractive priced American hops had been closed to a considerable extent so that in June 1963 already the following quantities were estimated as under contract: about 98% crop 1963, about 90% crop 1964 and about 65% crop 1965. At the end of May 1963, contracts on farms were still closed at 65 cents for crop 1963, 55/45 cents for crops 1963/64 and 45/40/40 cents for crops 1964/65/66. Corresponding to the small supply, quotations on farms were at the end of August already at 75 cents for crop 1963 and 75/50 cents for 1963/64. Under continued trading the following quantities were estimated as sold by the end of September 1963: 98/94/75% crop 1963/64/65.

Ample supply of the breweries from the great crop 1963 reduced the demand for free available hops of this crop year on farms. Shortly after the harvest the price stood at 65 cents and slipped slowly to a nominal quotation of 53 cents until the beginning of September 1963. There was practically no demand anymore until January/February 1964. Quotations went down to 35 cents and renewed demand was stimulated on this basis.

There were, however, still sufficient stocks in second hand to satisfy current orders. Only after these stocks had been sold out, the increased demand resulted in a rise of quotations up to 44 cents in March. Final stocks on farms were sold out 1964 on this basis.

Continued demand for American hops could not fail to reflect on the market for advance contracts. It was estimated in June 1964 that already the following quantities might be under contract:

Crop 1964 - 95%, Crop 1965 - 85%, Crop 1966 - 60%. Contracts for more than three crop years, too, have been signed.

**Hop exports  
U. S. A.**

Exports of US-Hops Crop 1963					
September 1st, 1963 — January 31st, 1964					
Country	lbs.	Ztr. je 50 kilos	Country	lbs.	Ztr. je 50 kilos
Ethiopia . . . . .	19,221	174	b. f. . . . .	8,100,937	73,491
Argentina . . . . .	95,816	869	Malaya . . . . .	21,367	194
Belgium-Luxembourg . . . . .	386,934	3,510	Mexico . . . . .	1,400,747	12,707
Bolivia . . . . .	61,319	550	Moçambique . . . . .	15,362	139
Brazil . . . . .	863,481	7,833	Nicaragua . . . . .	11,023	100
Canada . . . . .	1,972,650	17,896	Netherlands . . . . .	345,206	3,132
Ceylon . . . . .	17,725	161	Nigeria . . . . .	102,826	933
Chile . . . . .	2,619	24	Norway . . . . .	31,412	285
Colombia . . . . .	171,514	1,556	Austria . . . . .	84,035	762
Costa Rica . . . . .	24,210	220	Pakistan . . . . .	5,100	46
Denmark . . . . .	410,850	3,727	Panama . . . . .	42,694	387
Germany West . . . . .	2,037,368	18,483	Peru . . . . .	383,625	3,480
Dominican Republic . . . . .	63,093	572	Philippine Isl. . . . .	259,824	2,357
Ecuador . . . . .	30,000	272	Portugal . . . . .	10,902	99
Finland . . . . .	7,831	71	El Salvador . . . . .	11,043	100
France . . . . .	265,561	2,409	Singapore . . . . .	16,600	151
Great Britain . . . . .	163,320	1,482	Spain . . . . .	10,000	91
Guatemala . . . . .	55,208	501	Union of South Africa . . . . .	121,250	1,100
Honduras . . . . .	34,221	310	Sweden . . . . .	56,220	510
Hongkong . . . . .	10,000	91	Switzerland . . . . .	224,924	2,040
Ireland . . . . .	693,645	6,293	Taiwan . . . . .	44,379	403
Israel . . . . .	57,523	522	Trinidad . . . . .	8,770	80
Italy . . . . .	77,811	706	Czechoslovakia . . . . .	551,062	5,000
Japan . . . . .	387,430	3,515	Turkey . . . . .	44,091	400
Jugoslavia . . . . .	88,200	800	Uruguay . . . . .	10,918	99
Rep. Congo . . . . .	103,367	938	Venezuela . . . . .	628,548	5,702
			Other Countries . . . . .	62,624	568
c. f. . . . .	8,100,937	73,491	Total . . . . .	12,605,489	114,356
					110.23 lbs. = 1 Ztr. zu 50 kg

Hop Imports U.S.A. Crop 1963 September 1st, 1963 — January 31st, 1964		
Country	lbs.	Ztr. je 50 kg
Germany West . . . . .	3,111,714	28,229
Jugoslavia . . . . .	1,504,578	13,649
Canada . . . . .	401	4
Belgium-Luxembourg . . . . .	132,570	1,203
Other Countries . . . . .	134,751	1,222
Total . . . . .	4,884,014	44,307

About 85% of Canadian hops are produced in the Fraser Valley (Sardis). The district of Kamloops produces only 15% of the harvest. Rainfalls were distributed as follows:

	Jan.	Febr.	March	April	May	June	July	Aug.	Sept.
Sardis	3.68	6.47	3.39	5.13	1.68	1.75	3.44	0.35	2.33 inch.
Kamloops	0.97	0.07	0.11	0.78	0.14	0.92	1.55	0.94	1.03 inch.

Weather conditions with the exception of **Late Frosts** were favourable for the growth of the hops in both districts of production.

In the district of **SARDIS** it was necessary to spray 12 times against pests and diseases. The vines reached the height of the trellises about June 25th and were in **Bloom** about July 6th/13th. The hops showed a good overhang and cones on the lower third of the vines ripened.

**Picking** started on August 28th and was finished on September 27th under good weather conditions. The entire crop was handled by eight picking machines.

The hops were very good in colour and the quality of crop 1963 was considered excellent. The entire crop was judged as Grade I.

In the district of **KAMLOOPS** only two sprayings were necessary against pests and diseases. The vines developed very well and showed numerous **Laterals**. The hops reached the height of the trellises at the beginning of June and were in **Bloom** during the first week of July. The vines had a good overhang and the cones ripened on the lower third of the plants.

One picking machine is sufficient for the crop. The harvest was done under good weather conditions from September 5th to 26th.

The hops had a good colour and were better in quality than the year before. The entire crop was judged as Grade II.

Purchases on farms were made in part at 65 cents per lb. (DM 250.— per 50 kilos) all hops were sold out on March 30th, 1964, with the exception of a small remnant of 50,000 lbs. (about 1% of the crop).

**NAGANO.** There were favourable weather conditions in this district of production during the growing season. Up to 7 sprayings were effected against **Red Spider** and **Downy Mildew**.

	March	April	May	June	July	Aug.	Sept.
Precipitations	89	43	109	207	202	84	36 mm
Temperatures	2.7	11.5	16.2	20.7	23.5	24.5	18.0° C

The vines reached the height of the trellises during the first half of June. On June 13th, a **Typhoon** occasioned local damages. At this time, the hops went into **Premature Bloom**. Hop yards showed no very good stand. **Downy Mildew** had to be controlled very carefully. **Picking** started at the end of July and was finished under good weather conditions during the first half of August. The crop result was somewhat smaller as a consequence of premature bloom and typhoon damages.

**HOKKAIDO.** In this district, the weather was rather changeable during the growing season. Warm and rainy periods were interrupted by cold spells, so that the hops could not develop as well as in former years. Up to 12 sprayings were effected against **Downy Mildew** and **Red Spider**.

	March	April	May	June	July	August	Sept.
Precipitations	47	64	102	88	177	243	82 mm
Temperatures	—2.0	5.7	12.4	15.8	21.1	21.6	14.1° C

A new disease was observed for the first time and originally thought to be **Verticillium Wilt**. According to later informations, however, this disease seems to be of some other type. Research in this connection is still going on.

The hops reached the height of the trellises by the end of June and were in **Bloom** during the first half of July. The general stand of hop yards was not satisfactory especially regarding early varieties. **Picking** started in mid-August and was retarded by rainfalls until mid-September. There was some lack of labour especially during the start of the harvest.

Canada

Japan

The quality of the Japanese hops crop 1963 was judged as follows: 87% Grade I, 6% Grade II, 7% Grade III. The hops were not quite so good as the year before both in colour and lupulin. Sponsoring breweries accepted the entire crop at an average price of Yen 32,890.— per 50 kilos (DM 365.—).

About 60% of the hops in Japan are handled by around 2,000 small picking machines. It is intended to construct machines with a higher output.

**Chile**

It has been indicated that experiments with the cultivation of hop varieties both from the U. S. A. and from Europe have been under way in the south of the country. The quality of the hops picked in March 1963 was not unsatisfactory whereas yields have been very small.

**Australia**

**TASMANIA.** Complete information now in hand shows that climatic conditions during the growing season 1962/63 were as follows:

	1962					1963		
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Febr.	March
Precipitations	3.45	2.89	3.44	1.40	0.89	0.74	1.02	1.50 inch.
Temperatures Max.	53	60	61	68	71	78	73	71° F
Temperatures Min.	34	37	40	42	47	54	48	45° F

The hops could develop well under favourable weather. Eleven days of **Frost** at the beginning of the season did no damage. There was an infestation of **Red Spider** to be controlled in some hop yards. Locally there is some **Verticillium Wilt**, but not of the progressive type, which, for the time being, seems to be no danger.

The vines reached the height of the trellises during the third week of December. Good overhang was developed and the hops were in **Full Bloom** by mid-January 1963. The cones on the lower third of the vines ripened well.

**Picking** started during the third week in February and was finished by the end of March 1963. The weather during the harvest was favourable with the exception of two light rainfalls at the end of March. There are five picking machines in operation which handled about 12.5% of the crop.

The quality of the hops crop 1963 corresponded to the year before in all varieties with the exception of late hops.

**VICTORIA.** It can be recorded that precipitations for crop 1963 were as follows:

1962					1963		
Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Febr.	March
3.23	2.59	4.03	2.05	2.97	4.44	2.06	1.95 inch.

The acreage of 480 acres which was 6.4% smaller against the year before produced a total crop of 7,300 cwts. corresponding to a yield of 1,700 lbs. per acre. This yield was about 2.5% higher than in March 1962.

**New Zealand**

Precipitations during the season 1962/63 were distributed as follows:

1962					1963		
Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Febr.	March
4.18	4.41	11.98	4.92	1.50	2.98	6.08	4.89 inch.

The quite unusually wet weather in October 1962 has done heavy damages to the new plantings and retarded **Spring Work** by at least a fortnight. This restricted the growing season for the hops accordingly because bloom set in at the usual time.

Rainfalls in October 1962 were the heaviest during the last 10 years. For the rest, temperatures during the growing season 1962/63 were within normal limits, only the first half of December 1962 was warmer than normal. There was a little more sunshine than on the average.

The hops reached the height of the trellises during the third week of December and were in **Full Bloom** in mid-January 1963. The vines had only little overhang but the cones on the lower third of the plants had ripened well. It was not necessary to spray against either pests or diseases.

**Picking** started at the end of February and was finished within three to four weeks. There was no lack of labour. About 45% of the crop are handled by picking machines. Besides machines from England there are several local constructions in operation. The good weather during the harvest was interrupted by rains only occasionally.

The abnormal weather in October 1962 together with the shortened time of vegetation contributed to a smaller crop. The cones were not well closed and lighter than normal. Contents of lupulin, however, were over average. The entire crop, therefore, was judged as Grade I, and only a small quantity of Grade II was delivered. Prices remained unchanged against the year before both for English varieties as well as for new varieties of hops (DM 310.—/325.— per 50 kilos net). The entire harvest was easily sold.



# Crop 1964

The hop producing district in this country is situated between George and Knyma in the foothills of the Outeniqua Range. This side of the Range, looking against the sea receives relatively much rain, which is distributed over the entire year. The soil consists mostly of crumbled sandstone with a lower basis of clay. First experiences with the cultivation of hops were done in 1936. Mostly the variety "Golden Cluster" from New Zealand is planted.

Union of  
South Africa

The vegetative development of the hops in South Africa was not favoured by weather conditions. A heavy dryness from August to December 1963 and further insufficient rainfalls in January 1964 left their mark. During the season 1963/64 less than 50% of necessary rains have fallen and were distributed as follows:

1963					1964		
Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Febr.	March
0.61	0.28	1.53	1.81	4.60	1.16	3.78	1.63 inch.

The weather was warm and dry in August and September 1963 and cool in October. **Root Rot** did considerable damage locally during the preceding dormancy of the plants. Up to 60% of missing hills appeared. The months of November/December 1963 and January 1964 were very hot. The hops reached the height of the trellises only by the end of December and were in **Bloom** at the beginning of January. Some overhang could develop only in such hop yards where sufficient possibilities for irrigation were available. In other hop gardens, the vines did not even reach the height of the trellises. **Caterpillars** occasioned local damages both at the start and the end of the growing season, whereas there was little damage by **Red Spider**. The cones on the lower third of the vines ripened.

**Picking** started on February 10th, 1964, and was finished about March 23rd under cloudy and cool weather with occasional precipitations. There were not always sufficient pickers available. One picking machine is in operation and handles 25% of the crop. The yields were low but the hops had a higher alpha content than the year before and were judged generally better than average. The crop was graded as follows: 70% Grade I, 27% Grade II, 3% Grade III. The entire crop was taken over by the home breweries. It is expected that the former price of 47.5 cents (DM 295.— per 50 kilos) will be increased to 50/55 cents per lb. (DM 310.—/340.— per 50 kilos).

In the districts of **RIO NEGRO** and **NEUQUEN** growth was sometimes hampered by excessive rainfalls which were distributed as follows:

Argentina

1963			1964	
October	November	December	January	February
64	34.7	29.5		23.6 mm

Local damages were caused by **Hail** as well as heavy **Storms**. Only up to two sprayings, however, were necessary against **Pests** and **Diseases**. The hops reached the height of the trellises in November 1963. **Bloom** started around December 20th. Locally, the hops had grown a strong overhang. The ripening of the hops was damaged by **Frosts** in the small separate district of **El Bolson**. Cones on the lower part of the vines could not ripen completely. **Picking** was effected from February 20th to March 15th, 1964. In this district of production there are already six picking machines in operation which handled about 50% of the harvest. The crop of about 2,000 cwts. was harvested on the unchanged acreage of 297 acres (742 lbs. per acre). No new hop yards were planted. The hops crop 1964 were somewhat lower in **Quality** than the year before. The crop was graded as follows: 30% Grade I, 40% Grade II, 30% Grade III. Prices to farmers were unchanged at Pesos 300.— per kilo (DM 465.— per 50 kilos). It is estimated that about 40% of the crop continued unsold in hand of farmers at the time of this report whereas there are still 500 cwts. of hops from earlier crops unsold on farms.

In the **PROVINCE of BUENOS AIRES** hop yards in the district of **Commandante Nicanor Otamendi** which had been damaged by accidental dusting with weed killer distributed from airplanes the year before had to be ploughed out completely. The area of 30 acres was once again planted elsewhere but is not yet producing. Favourable weather conditions prevailed in the small district of **Sierra de la Ventana**. **Downy Mildew** was controlled by careful sprayings.

**TASMANIA.** The harvest in March 1964 brought a smaller result than usual as a consequence of unfavourable weather conditions. During the beginning of the growing season the weather was good although there was some lack of subsoil moisture. **Spring Work** was finished early and the hops were off to a good start. Thrice repeated **Frosts** in August 1963 and strong variations in temperatures hampered the growth of the hops at an early time and the plants were not able to offset this delay. Maximum and minimum temperatures increased only slowly until December 1963 when a monthly average of 72° F maximum and 49° F minimum was reached. Temperatures in March were lower than those in February. Strong **Winds** in January and March 1964 did not benefit the hops.

Australia

Rainfalls were distributed as follows:

1963					1964		
Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Febr.	March
1.60	2.87	0.76	1.31	0.81	1.16	3.58	1.25 inch.

Some hop yards were sprayed once only against **Red Spider**. A not progressive type of **Verticillium Wilt** has been observed locally.

The plants reached only in part the height of the trellises about the end of January 1964. Occasionally there was some overhang. **Picking** started at the beginning of March and was finished during the first week in April under good weather conditions. Seven picking machines handled about 20% of the crop. The hops could not be judged well both in colour and in quality. A crop of about 1,500,000 lbs. was harvested on a total area of 1,487 acres (1,009 lbs. per acre).

**VICTORIA.** Rainfalls during the season 1963/64 were distributed as follows:

1963					1964		
Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Febr.	March
460	496	360	179	129	19	207	209 points

The rainfalls were very scant especially during the important months of December 1963 and January 1964. This seems to be the deciding factor for the smaller crop which was 25% less than the year before. A quantity of 671,962 lbs. was produced on an area of 250 acres (1,292 lbs. per acre).

#### New Zealand

According to informations received up to now a smaller crop which is estimated at about 630,000 lbs. has been harvested in 1964. It is said that not only yields were under average but that the acreage, too, was reduced.

#### Growth 1964 in Germany

The winter of 1963/64 was mild with relatively little snowfall which opened no encouraging prospects regarding the increase of subsoil moisture. Hopes for a short winter after a thaw at the beginning of January 1964, however, were not realised. After the small snow-cover had disappeared, frost started once again and reigned until the end of February 1964. Hop yards, however, everywhere came well out of dormancy so that practically no missing hills appeared during the **Uncovering** and **Cutting**. Spring work, however, was retarded as the weather in March generally remained too cold.

**HALLERTAU.** **Spring Work** could start in March 1964 always according to the weather and soil conditions. The work was finished during the second half of April under favourable weather. Hops already cut during the autumn of 1963 showed a good development.

Hop yards could develop well under favourable weather. Climatic conditions continued to produce a very luxuriant growth in May. The weather remained favourable without change so that the vines sometimes already had reached the height of the trellises by the end of May/beginning of June. The development of the **Laterals** was especially good. **Downy Mildew** as well as **Aphids** which locally appeared very strongly had to be carefully controlled. **Red Spider** was less prevalent.

Hop yards were healthy and vigorous in mid-June and showed healthy and sapful leaves as well as numerous laterals. The vines reached the height of 6/6.5 m and the height of the trellises had been reached in many hop yards already. Preventive sprayings against **Downy Mildew** as well as **Aphids** had to be continued. The general stand of the hops was about two weeks in advance as compared to the year before.

**TETTANG.** In this district the **Uncovering** and **Cutting** could start only at the end of March/beginning of April and was finished during the second half of April.

The plants were off to a good start at the beginning of May. Warm weather and ample rainfalls benefited the development of the hops. The plants were healthy but still somewhat retarded in growth at the end of May. Very heavy rainfalls by the end of May did no damage. **Downy Mildew** had to be controlled and local sprayings against **Red Spider** had to be effected.

The hop vines had reached a height of 4.5 m and 5.5 m by the middle of June and locally the height of the trellises had been reached. The plants were strong and healthy and showed a normal development of laterals. Up to five sprayings were effected especially against **Aphids**. The uniformly favourable aspect of the hop yards, however, showed a less advanced growth compared to other districts of production. Rainfall would be welcome.

**SPALT. Spring Work** could be effected in April under very favourable weather conditions. Sunny and warm weather during the second half of April favoured the development of the plants. By the end of May, hop yards showed a good aspect. The vines had reached half the height of the trellises in all locations. **Aphids** as well as **Red Spider** had to be carefully controlled already during the second half of May. **Downy Mildew** was noted only locally. In mid-June the hops were strong and healthy and had developed numerous **Laterals**. On the average a height of 4.5 m was reached, sometimes already 6 m, and in many cases the vines were up to the height of the trellises. Rainfalls, however, are urgently necessary.

**HERSBRUCK GEBIRGE.** The entire development was retarded by cold weather until the end of March. On lighter soils the **Uncovering** and **Cutting** was started only at the beginning of April whereas work was still retarded in hop yards on heavy soils. The work, however, was only occasionally hampered by light rainfalls after a cold spell around April 10th/12th after which the temperatures were climbing continually. The work was finished during the second half of April. Early cut gardens had shown a good growth.

Warm weather and welcome rainfalls by the end of April/beginning of May benefited the growth of the hops. The favourable weather conditions continued during May so that the plants could make good progress. Heavy rainfalls provided welcome moisture at the beginning of June. Growth continued well and the development of **Laterals** was satisfactory. In mid-June the plants had a height of 4.5/5.5 m and had reached the height of the trellises locally. The vines are strong and healthy and show numerous laterals. Up to five sprayings were effected against a strong infestation of **Aphids** as well as **Downy Mildew**. Hop yards in this district present an uniformly favourable aspect and the growth generally is about 14 days in advance as against the year before.

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The hops could develop well during the second half of June. The possibilities of **Premature Bloom** were avoided by timely precipitations and a decrease of the almost too high temperatures at the same time. A good crop can be expected according to the present stand of the hop yards but it has always to be borne in mind that the months of July and August are decisive for the crop result.

**JOH. BARTH & SOHN**

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## The Hop Industry in Germany Progress and Prospects

Since the end of the war, beer has found an ever increasing consumer acceptance and beer sales have enjoyed a constant expansion. The technological progress in brewing has intensified the already existing tendency to evaluate hops according to analytical view points. This coincides with the efforts towards a more efficient usage of the bitter value of the hops.

Hop farmers have shown impressive enterprise in practically maintaining unchanged cost of production over the past twenty years. This success is due to the mechanisation of hop cultivation which has been visibly demonstrated by the rapid introduction of the picking machine. A further example of the economy achieved in hop cultivation is shown by the fact that between 1957 and 1962 the man hours per one hectare of acreage (picking and kilning excluded) have been reduced from 2.400 to 1.400 hours (from abt. 970 hours to abt. 565 hours per acre) corresponding to abt. 42%.

This, however, has been possible only by heavy investments which in their turn have rendered hop farmers economically dependent to a great degree. Farmers' hopes for more stable hop prices were realised by the introduction of advance contracts which now already are in effect for a great proportion of future crops. The hop market cannot exist any longer without such contracts.

Prospects for the future development of the German hop industry may be based upon further expanding beer output and consequently increased hop sales despite ever lower hopping rates. Demand for hops will refer not only to the well known aromatic types of hops but will center more and more upon hops with high bitter value. Quality and price of the hops will attain always more importance at the international competition for customers both at home and abroad. Hop concentrates will increase in importance.

The present basic position of the German hop industry does not appear unfavourable regarding future development. Hop farmers in Germany, however, will do well if they prepare early for the developing new demands of the market. Maximum importance continues to rest with the necessity of decreasing cost of production by further mechanisation. For this, there are still possibilities to be found in the erection of hop yards with increased width between hills and greater distance between rows of poles by using concrete or steel masts. This facilitates field work and makes room for more economical machinery. Selective planting of disease tolerant and resistant varieties of hops and of varieties with high lupulin yield will be necessary. Hop yards planted to early, middling and late varieties in proper proportion will provide for a more extended harvest and a corresponding better utilization of the expensive harvest machinery. Considerable improvements are still possible and in fact already necessary in kilning the hops and furthermore there is still room for important improvements in picking machines.

Much as has been done in the past already only continually increased efficiency of the German hop industry will determine its future position on the hop world market.