

THE BREWING AND MALTING TRADES

Note.—For information regarding the scope of the Census, instructions given to firms for making returns, and definitions of the terms used in this report, reference should be made to the Introductory Notes on pages v to xviii.

Introductory

These trades comprise firms that were engaged wholly or mainly in the brewing of beer, ale, stout and porter and the manufacture of malt.

The following table shows the main results of the Censuses of 1930 and 1924 in respect of firms in Great Britain that employed an average of more than ten persons. The figures for 1924 include the bottling departments owned by certain brewers that made separate returns for these departments at the 1930 Census (see report on the Wholesale Bottling Trade, page 215). The separation of the bottling departments is not yet, however, complete. About 1,900 persons were employed in the bottling departments in question in 1930 and the figures for that year are understated in relation to those for 1924 to this extent.

Particulars	Unit	1930	1924
Value of products and work done (Gross output)	£'000	143,358	156,614
Cost of materials used	„	27,275	36,072
Paid for work given out to other firms	„	149	183
Estimated Excise duty	„	70,000	74,100
Net output (excluding estimated Excise duty)	„	45,934	46,259
Average number of persons employed	No.	61,391	65,353
Net output per person employed	£	748*	708*
Power available :—			
Prime movers	H.P.	31,592	41,910
Electric motors driven by purchased electricity	„	80,951	56,590
Number of returns	No.	534	714
Number of establishments	„	1,099	†

* Excluding estimated Excise duty.

† Not available.

Deficiencies in 1930 aggregates.—The aggregate number of persons employed in 1930 by firms that stated that they employed not more than ten persons on the average was 2,033, the corresponding figure for 1924 being 1,735.* The value of the gross output of the

* This figure is inclusive of particulars regarding the few firms in Northern Ireland, for which separate information is not available for publication.

small firms in 1924 was £2,617,000* and particulars of the items included in this figure are given below:—

	£'000
Beer, ale, stout and porter brewed	1,421 (206,000 barrels)
Malt	974 (948,000 cwt.s.)
Grains, malt commings and other offals	36
Liquors purchased and bottled	113
Malting on commission	57
Other goods made and work done	16
TOTAL	2,617*

In addition, 4 firms to which schedules were sent at the 1930 Census and 100 at that of 1924 furnished no information; these firms either had small businesses or had ceased productive operations before the end of the censal year.

Size of firms.—In the following table the main particulars recorded at the Census of 1930 are grouped according to the average numbers of persons shown in the returns:—

Size of firm (average numbers employed)	Number of returns	Gross output	Net output*	Average number of persons employed	Net output per person employed*
	No.	£'000	£'000	No.	£
11-24 ...	116	3,703	1,191	2,060	578
25-49 ...	140	9,913	2,959	5,058	585
50-99 ...	129	18,961	6,196	8,891	697
100-199 ...	85	28,638	9,095	11,544	788
200-299 ...	28	15,560	5,504	6,977	789
300-399 ...	10	8,414	3,147	3,345	941
400-499 ...	3	4,210	1,321	1,304	1,013
500-749 ...	12	17,975	5,281	7,257	728
750-999 ...	5	10,389	3,263	4,342	751
1,000 and over ...	6	25,595	7,977	10,613	752
TOTAL ...	534	143,358	45,934	61,391	748

* Excluding estimated Excise duty.

Regional distribution.—In the following table the results recorded at the Censuses of 1930 and 1924 are grouped according to the principal areas† of Great Britain in which firms in these trades are situated:—

* These figures are inclusive of particulars regarding the few firms in Northern Ireland, for which separate information is not available for publication.

† For particulars see page xviii.

Area	Number of returns	Gross output	Net output*	Average number of persons employed	Net output per person employed*
	No.	£'000	£'000	No.	£
1 ...	1930 53	37,353	13,049	15,272	854
	1924 82	34,785	11,014	13,375	823
2 ...	1930 61	16,291	5,500	5,402	1,018
	1924 96	21,203	6,335	7,324	865
3 ...	1930 62	12,395	4,210	5,272	799
	1924 70	14,283	4,020	5,805	693
4 ...	1930 19	2,581	810	1,322	613
	1924 26	3,007	871	1,308	666
5 ...	1930 40	24,161	6,484	9,669	671
	1924 60	30,609	9,747	12,269	794
6 ...	1930 234	38,960	13,022	18,425	707
	1924 292	38,108	9,776	18,473	529
7 ...	1930 18	2,524	704	1,014	695
	1924 29	4,015	1,117	1,562	715
8 ...	1930 7	411	169	255	661
	1924 8	425	130	244	533
9 and 10	1930 40	8,682	1,986	4,760	417
	1924 51	10,179	3,249	4,993	651
TOTAL	1930 534	143,358	45,934	61,391	748
	1924 714	156,614	46,259	65,353	708

* Excluding estimated Excise duty.

Northern Ireland.—Owing to the risk of disclosing information relating to individual firms, separate details of the output of the Brewing and Malting Trades in Northern Ireland are not available for 1924 or 1930. The information received for the later year was included in a combined report on the Spirit Distilling Trade, the Brewing and Malting Trades and the Tobacco Trade (see page 2).

Sub-divisions of the industry.—The following table shows the results of grouping the returns for the 1930 Census according to the main kind of business carried on by firms in the Brewing and Malting Trades:—

Group	Number of returns	Gross output	Net output*	Average number of persons employed	Net output per person employed*
	No.	£'000	£'000	No.	£
Brewing only ...	236	57,666	19,095	22,054	866
Brewing and malting ...	205	80,095	25,152	35,272	713
Malting (including commission malting) ...	93	5,597	1,687	4,065	415
TOTAL ...	534	143,358	45,934	61,391	748

* Excluding estimated Excise duty.

Production

Total make of malt.—Firms that made their returns on schedules for the Brewing and Malting Trades were required to state the total quantity of malt made by them in the year, whether subsequently used by them for brewing or not. The total quantity of malt returned for 1930 was 11,965,000 cwts., of which 5,967,000 cwts. were made by brewers mainly for their own use and 5,998,000 cwts. by firms that were not engaged in brewing; a total of 11,518,000 cwts. was returned for 1924, of which 4,628,000 cwts. were made by brewers and 6,890,000 cwts. by firms that were not brewers. In addition, 1,156,000 cwts. of malt were made in 1924 by firms employing not more than ten persons on the average (including the small production of firms in Northern Ireland), this amount being about 9 per cent. of the total production in that year. These figures do not include malt made by distillers for use in the manufacture of spirits.

It is stated in the Report of the Commissioners of Customs and Excise for the year ended 31st March, 1931, that the quantity of malt used by brewers in Great Britain and Northern Ireland during the years ended September 30th, 1930 and 1924, amounted to 10,080,000 cwts. and 11,275,000 cwts. respectively.

Exports of malt were 356,000 cwts. in 1930 and 294,000 cwts. in 1924, while retained imports were 42,000 cwts. and 33,000 cwts. respectively.

While the periods covered by the Census figures differ from those to which the Customs and Excise figures relate (see page 173) it seems clear that in 1930 a greater quantity of the malt made by maltsters was available in Great Britain for purposes other than brewing than in 1924.

Output sold or added to stock.—The following table shows the value and, where available, the quantity of beer, ale, stout, porter, malt, etc., made in 1930 and 1924 for sale:—

Kind of goods	1930						1924	
	Returned on schedules for						Total	
	The Brewing and Malting Trades			All trades				
	Quantity	Value	Ent-ries	Quantity	Value	Ent-ries	Quantity	Value
	Thous. standard barrels*	£'000	No.	Thous. standard barrels*	£'000	No.	Thous. standard barrels*	£'000
Beer, ale, stout and porter brewed...	19,163	129,156	440	19,163	129,156	440	20,280	140,307
	Th. cwts.			Th. cwts.			Th. cwts.	
Malt sold ...	5,434	4,977	122	5,441	4,984	126	5,836	5,954
Grains, malt com-mings and other offals sold ...	...	702	499	...	706	507	...	1,016
Other products of the Brewing and Malting Trades	...	14	5	...	14	5	—	—
TOTAL—PRINCIPAL PRODUCTS ...	...	134,849	...	...	134,860	...	...	147,277

* Barrels of 36 gallons at a gravity of 1,055°.

The values shown for each year for beer, ale, stout and porter brewed are inclusive of Excise duty in the case of liquor for home consumption and less drawbacks in the case of liquor for export. The rate of duty on home-brewed beer throughout the year 1924 was £5 per standard barrel: the same rate applied in the early part of 1930 but was increased to £5 3s. 0d. per standard barrel as from April 15th of that year. A rebate of £1 per barrel on beer brewed for sale applied throughout both years.

The quantity of beer charged with duty in the United Kingdom in the years ended March 31st, 1931 and 1925, according to the Reports of the Commissioners of H.M. Customs and Excise, was 18,488,000 and 20,954,000 standard barrels respectively. The differing periods covered by the Census returns and the exclusion of the output of small firms and of firms in Northern Ireland from the particulars shown in the table preclude any close comparisons between the two sets of figures. At the 1930 Census over 55 per cent. of the gross output value of the Brewing and Malting Trades was recorded on returns relating to periods ending on September 30th, 1930, or earlier, while 32 per cent. represented periods ending in the last quarter of 1930, and the remaining 13 per cent. periods ending in the first quarter of 1931. The total output of beer as reported at the 1930 Census (19,163,000 standard barrels) exceeded by 2 per cent. the quantity stated by the Excise Authorities to have been produced in the United Kingdom in the calendar year 1930, viz., 18,811,000 standard barrels. It is clear that the main cause of the excess in the Census total was the inclusion of a proportion of the output in the concluding part of the year 1929, when the average monthly production was greater by over 3 per cent. than that for 1930.

Prices.—The average selling values of beer, ale, stout, etc., and of malt in 1930 and 1924, as calculated from the Census returns, are shown in the following table:—

Kind of goods	Average value		1930 as a percentage of 1924
	1930	1924	
Beer, ale, stout and porter ...	£ per standard barrel 6·74	£ per standard barrel 6·92	97·4
Malt ...	£ per cwt. 0·92	£ per cwt. 1·02	90·2

The average value per barrel of beer, etc., exclusive of the estimated duty, was £3·09 in 1930 and £3·26 in 1924, showing a decrease of 5·2 per cent. These averages relate to the whole output of beer as shown in the Census returns, whether in cask or in bottle. As explained on page 169 the proportion of bottled beer included in the output was somewhat greater in 1924 than in 1930, but the price relationship shown for the two years was not materially affected by this change. The effect of the somewhat greater quantity

of beer exported in 1930 (which was valued less drawbacks in the Census returns) was also not sufficiently important to affect the comparison appreciably.

Volume of production in 1930 and 1924.—The following table compares the volume of production of beer, ale, stout, malt, etc., in 1930 and 1924 :—

Kind of goods	Total production			1930 as a percentage of 1924
	1930	1924		
	As returned	As returned	At 1930 average values	Per cent.
	£'000	£'000	£'000	
Beer, ale, stout and porter... ..	129,156	140,307	136,659	95
Malt	4,984	5,954	5,371	93
Grains, malt commings and other offals	706	1,016	987*	72
Other principal products	14	—	—	—
TOTAL	134,860	147,277	143,017	94

* Based on the average value of the preceding items.

Malting on commission.—The total amount recorded as received for malting on commission in 1930 was £175,000, the corresponding total for 1924 being £171,000.

Production, exports and imports.—The following table shows, in relation to production, the quantities of beer, ale, stout and porter and of malt exported from the United Kingdom in 1930 and 1924, together with the quantities imported and retained. The production figures shown for beer are those reported by the Excise Authorities as produced in the calendar years 1930 and 1924.

Kind of goods	Production	Exports	Proportion of produc- tion exported	Retained imports	Available for use in the United Kingdom		Share of home market held by British products
					Th. standard barrels*	Th. standard barrels*	
Beer, ale, stout and porter	1930	18,811	329	1.7	1,550	20,032	92.3
	1924	20,732	263	1.3	1,510	21,979	93.1
Malt	1930	11,972†	356	3.0	42	11,658†	99.6
	1924	12,674†	294	2.3	33	12,413†	99.7

* Barrels of 36 gallons at a gravity of 1,055°.

† Not including malt made by distillers for their own use.

Other products.—In addition to the output shown in the table of principal products on page 172, the following goods were produced in 1930 and 1924 by firms that made their returns on schedules for the Brewing and Malting Trades. These goods are dealt with in the reports on those trades in which the principal output was recorded.

Kind of goods	1930	1924
	Value	Value
	£'000	£'000
Aerated and mineral waters	224	285
	(2,158)	(2,453)
Non-alcoholic drinks brewed	11	48
Liquors purchased and bottled :—		
Beer, ale, stout and porter	5,949	} 8,021
Spirits	568	
Wines	137	
Cider and perry	49	
Other and unclassified liquors	219	
Casks and barrels made or repaired	579	549
Malt extracts and malt flour	551	177
Other goods made	47	104
TOTAL	8,334	9,184

Employment and Wages

Employment.—The following table shows the average numbers of persons employed in 1930 and 1924 :—

Persons employed	Males		Females		Total	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
1930						
Operatives (average for the year)	2,029	44,847	629	5,098	2,658	49,945
Administrative, technical and clerical staff (as at 18th October)	546	10,287	104	1,159	650	11,446
TOTAL	2,575	55,134	733	6,257	3,308	61,391
1924						
Operatives (average for the year)	2,213	47,974	594	5,149	2,807	53,123
Administrative, technical and clerical staff (as at 18th October)	515	10,885	72	1,345	587	12,230
TOTAL	2,728	58,859	666	6,494	3,394	65,353

Wages.—The available information as to the amount of wages paid in 1930 and 1924 is given on pages 18 and 19.

Power

The following table shows the capacity of prime movers, electric generators and electric motors ordinarily in use and in reserve or idle in 1930 and 1924 :—

Power equipment	1930			1924		
	Ordinarily in use	In reserve or idle	Total	Ordinarily in use	In reserve or idle	Total
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS						
Reciprocating steam engines	15,484	3,983	19,467	21,384	6,446	27,830
Steam turbines	64	—	64	19	—	19
Internal combustion engines :—						
Gas	5,876	1,336	7,212	9,191	1,667	10,858
Petrol, kerosene, or other light oils ...	817	462	1,279	934	125	1,059
Heavy oils	1,944	1,446	3,390	1,972	53	2,025
Water engines	135	45	180	116	—	116
Other prime movers ...	—	—	—	3	—	3
TOTAL	24,320	7,272	31,592	33,619	8,291	41,910
	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
ELECTRIC GENERATORS						
Driven by						
Reciprocating steam engines	3,237	975	4,212	2,433	1,673	4,106
Internal combustion engines :—						
Gas	534	39	573	806	126	932
Petrol, kerosene, or other light oils	111	256	367	156	—	156
Heavy oils	669	975	1,644	1,151	44	1,195
Water engines	26	—	26	30	—	30
TOTAL	4,577	2,245	6,822	4,576	1,843	6,419
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
ELECTRIC MOTORS						
Driven by						
Electricity generated in same works ...	6,857	855	7,712	6,895	718	7,613
Purchased electricity	75,376	5,575	80,951	51,107	5,483	56,590
TOTAL	82,233	6,430	88,663	58,002	6,201	64,203

Consumption of fuel

The following table shows the quantities of coal, coke and electricity recorded as used in 1930 :—

Kind of fuel used	For power (driving engines)	For other purposes (so far as recorded)	For power and other purposes, not separately distinguished
	Tons	Tons	Tons
Coal	144,932	548,646*	64,716
Coke	2,319	19,557*	3,795
Electricity used for all purposes :—			B.T.U. (Kw.-hrs.) '000
Generated in same works			6,255
Purchased			48,351
TOTAL—Electricity			54,606

* These figures were recorded by firms representing 82·2 per cent. of the net output of the whole trade.

TABLES

I. Summary of results

Particulars	Unit	England and Wales	Scotland	Great Britain
Value of products and work done (Gross output)	£'000	134,676	8,682	143,358
Cost of materials used	"	25,543	1,732	27,275
Paid for work given out to other firms	"	146	3	149
Estimated Excise duty	"	65,039	4,961	70,000
Net output (excluding estimated Excise duty)	"	43,948	1,986	45,934
Average number of persons employed	No.	56,631	4,760	61,391
Net output per person employed	£	776*	417*	748*
Power available :—				
Prime movers	H.P.	28,110	3,482	31,592
Electric motors driven by purchased electricity	"	75,347	5,604	80,951

* Excluding estimated Excise duty.

II. Production

A.—TOTAL MAKE OF MALT, AS RETURNED ON SCHEDULES FOR THE BREWING AND MALTING TRADES

	Cwts.
England and Wales	10,878,000
Scotland	1,087,000
Great Britain	11,965,000

B.—OUTPUT SOLD OR ADDED TO STOCK AND WORK DONE

Kind of goods made and work done	Unit	England and Wales	Scotland	Great Britain
Beer, ale, stout and porter brewed	<i>Th. standard barrels</i> §	17,805	1,358	19,163
	£'000	121,154	8,002	129,156
Malt sold	<i>Th. cwts.</i>	5,070	364	5,434
	£'000	4,698	279	4,977
Grains, malt commings and other offals sold	£'000	648	54	702
Other products of the Brewing and Malting Trades	"	14	†	14
	<i>Th. doz. botts.</i>	*	*	2,158
Aerated and mineral waters	£'000	*	*	224
Non-alcoholic drinks brewed	£'000	11	—	11
Liquors purchased and bottled :—				
Beer, ale, stout and porter	"	*	*	5,949
Spirits	"	568	—	568
Wines	"	137	—	137
Cider and perry	"	49	—	49
Other and unclassified liquors	"	219	—	219
Casks and barrels made or repaired	"	500	79	579
Malt extracts and malt flour	"	*	*	551
Other goods made	"	46	1	47
TOTAL VALUE OF GOODS MADE	£'000	134,510	8,673	143,183
Malting done on commission	"	166‡	9‡	175‡
TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT)... ..	£'000	134,676	8,682	143,358

§ Barrels of 36 gallons at a gravity of 1,055°.

† Less than £500.

* Owing to the possible disclosure of information relating to individual firms, separate particulars cannot be given for England and Wales and for Scotland.

‡ Amount received for work done.

III. Employment

A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1930

Persons employed	Males		Females		Males and females	
	Under 18	All ages	Under 18	All ages	Under 18	All ages
<i>England and Wales :—</i>						
Operatives	1,835	41,927	554	4,708	2,389	46,635
Administrative, etc.*	500	9,434	95	1,015	595	10,449
TOTAL	2,335	51,361	649	5,723	2,984	57,084
<i>Scotland :—</i>						
Operatives	213	3,348	81	439	294	3,787
Administrative, etc.*	46	853	9	144	55	997
TOTAL	259	4,201	90	583	349	4,784
<i>Great Britain :—</i>						
Operatives	2,048	45,275	635	5,147	2,683	50,422
Administrative, etc.*	546	10,287	104	1,159	650	11,446
TOTAL	2,594	55,562	739	6,306	3,333	61,868

* Administrative, technical and clerical staff.

B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1930

Week ended	Males and females			Week ended	Males and females		
	England and Wales	Scotland	Great Britain		England and Wales	Scotland	Great Britain
Jan. 18 ...	46,867	3,771	50,638	July 19 ...	45,002	3,687	48,689
Feb. 15 ...	46,570	3,721	50,291	Aug. 16 ...	45,111	3,729	48,840
Mar. 15 ...	46,423	3,796	50,219	Sept. 13 ...	45,182	3,728	48,910
April 12 ...	46,530	3,783	50,313	Oct. 18 ...	46,635	3,787	50,422
May 17 ...	46,158	3,810	49,968	Nov. 15 ...	46,891	3,805	50,696
June 21 ...	45,233	3,726	48,959	Dec. 13 ...	47,577	3,814	51,391
AVERAGE FOR THE TWELVE MONTHS					46,182	3,763	49,945

IV. Power

PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS.

Power equipment	England and Wales		Scotland		Great Britain	
	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle	Ordinarily in use	In reserve or idle
PRIME MOVERS						
Reciprocating steam engines	13,099	3,642	2,385	341	15,484	3,983
Steam turbines	64	—	—	—	64	—
Internal combustion engines :—						
Gas	5,367	1,220	509	116	5,876	1,336
Petrol, kerosene, or other light oils ...	809	462	8	—	817	462
Heavy oils	1,833	1,446	111	—	1,944	1,446
Water engines	123	45	12	—	135	45
TOTAL	21,295	6,815	3,025	457	24,320	7,272
TOTAL OF PRIME MOVERS INSTALLED	28,110		3,482		31,592	
ELECTRIC GENERATORS						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines	2,989	867	248	108	3,237	975
Internal combustion engines :—						
Gas	502	15	32	24	534	39
Petrol, kerosene, or other light oils ...	111	256	—	—	111	256
Heavy oils	669	975	—	—	669	975
Water engines	16	—	10	—	26	—
TOTAL	4,287	2,113	290	132	4,577	2,245
TOTAL OF ELECTRIC GENERATORS INSTALLED	6,400		422		6,822	
ELECTRIC MOTORS						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works ...	6,349	848	508	7	6,857	855
Purchased electricity	70,047	5,300	5,329	275	75,376	5,575
TOTAL	76,396	6,148	5,837	282	82,233	6,430
TOTAL OF ELECTRIC MOTORS INSTALLED	82,544		6,119		88,663	

V. Consumption of fuel

Kind of fuel used	England and Wales	Scotland	Great Britain
	Tons	Tons	Tons
Coal used for power*	117,121	27,811	144,932
Coke used for power*	2,219	100	2,319
	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000	B.T.U. (Kw.-hrs.) '000
Electricity used for all purposes :—			
Generated in same works	5,680	575	6,255
Purchased	45,495	2,856	48,351
TOTAL—Electricity	51,175	3,431	54,606

* In addition, 64,716 tons of coal (62,962 tons in England and Wales and 1,754 tons in Scotland) and 3,795 tons of coke (3,793 tons in England and Wales and 2 tons in Scotland) were recorded as used for power and for other purposes, not separately distinguished.