

THE OIL AND TALLOW TRADE

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

This trade comprises firms that were engaged wholly or mainly in the blending of lubricating oils (other than lubricating oils made at petroleum refineries, for which see pages 378-82) and the refining or blending of fish oils and animal fats. 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 :—

Particulars	Unit	1930	1924
Value of products made and of work done (Gross output).	£'000	16,446	11,757
Cost of materials used	„	11,494	9,324
Paid for work given out to other firms	„	2	1
Net output	„	4,950	2,432
Average number of persons employed	No.	8,081	6,303
Net output per person employed	£	613	386
Power available :—			
Prime movers	H.P.	6,792	5,695
Electric motors driven by purchased electricity	„	7,814	3,967
Number of returns	No.	168	178
Number of establishments	„	186	*

* 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 1,342*. In addition, 27 firms to which schedules were sent at the 1930 Census and 40 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.

The value of the gross output of the small firms in 1924 was £1,792,000*, and particulars of the items included in this figure are given below :—

	£'000
Lubricating oils, mixed, including greases	702
Animal (except marine animal) oils, fats and greases (except lard and stearine)	566
Stearine	18
Fish and marine animal oils :—	
Whale oil	8
Other and unclassified	39
Other oils (except petroleum and vegetable and seed oils)	270
Bones for manufacturing purposes and for manure ...	29
Other goods	160
TOTAL	1,792

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

About 18 per cent. of the total number of persons employed by all firms in this trade in 1924 and about 13 per cent. of the value of the gross output was recorded on returns made by firms employing not more than ten persons. The number of employees recorded by firms of this kind at the 1930 Census was about 20 per cent. of the total reported by all firms. It is possible that the numbers recorded for 1930 may include persons employed mainly in merchanting operations.

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 ...	77	1,790	425	1,263	337
25-49 ...	46	2,786	731	1,578	463
50-99 ...	28	3,545	700	1,977	354
100-199 ...	11	4,319	1,545	1,541	1,003
200-399 ...	6	4,006	1,549	1,722	900
TOTAL ...	168	16,446	4,950	8,081	613

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 this trade are situated :—

Area	Number of returns	Gross output	Net output	Average number of persons employed	Net output per person employed	
	No.	£'000	£'000	No.	£	
1 ...	1930	41	4,395	1,505	2,703	557
	1924	30	2,299	523	1,420	368
2 ...	1930	46	7,351	2,498	2,668	936
	1924	49	4,546	973	1,962	496
3 ...	1930	18	522	161	507	317
	1924	19	788	137	569	241
4 ...	1930	9	510	97	251	389
	1924	12	406	110	340	324
6 ...	1930	26	2,616	458	1,110	412
	1924	26	2,239	379	781	485
9 ...	1930	16	704	134	543	247
	1924	16	819	119	517	236
10 ...	1930	8	247	61	230	265
	1924	14	327	101	480	210
Other areas ...	1930	4	101	36	69	519
	1924	12	333	90	234	385
TOTAL	1930	168	16,446	4,950	8,081	613
	1924	178	11,757	2,432	6,303	386

* For particulars see page xviii.

Northern Ireland.—Owing to the risk of disclosing particulars relating to individual firms, separate details of the output of the Oil and Tallow Trade in Northern Ireland in 1930 were not published, the information being combined in general totals covering the manufacture of chemicals, fertilisers, paints and oils (see page 264).

Production

Principal products.—The following table shows the value and, where available, the quantity of mixed lubricating oils and other oils and fats produced in 1930 and 1924 :—

Kind of product	1930						1924	
	Returned on schedules for						Total	
	The Oil and Tallow Trade			All trades				
	Quan- tity	Value	Ent- ries	Quan- tity	Value	Ent- ries	Quan- tity	Value
Lubricating oils, mixed, including greases :—	Th. tons	£'000	No.	Th. tons.	£'000	No.	Th. tons	£'000
<i>Returned in tons</i> ...	249.9	6,089	76	272.8	6,754	136	186.3	4,638
<i>Returned in gallons</i> ...	Th. galls.			Th. galls.			Th. galls.	
	17,451	1,573	15	17,451	1,573	15	4,863	583
TOTAL—Lubricating oils	...	7,662	...	...	8,327	...	...	5,221
Animal oils, fats and greases (except marine animal) :—	Th. tons			Th. tons			Th. tons	
Tallow, not refined ...	11.8	320	31	14.1	388	42		
Refined tallow and oleo- margarine and oleo oil	10.7	647	30	10.9	652	32		
	*	166	3	*	172	4		
Other and unclassified animal oils, fats and greases (except lard, dripping, suet and stearine) ...	10.0	225	...	28.9	770	...	62.9	2,722†
Stearine ...	4.0	131	8	7.2	298	10	*	585†
TOTAL—Animal oils, fats and greases ...	...	1,489	...	...	2,280	...	...	3,529
Fish and marine animal oils, fats and greases (refined and unrefined) :—								
Whale oil ...	30.1	915	10	30.1	915	10	8.8	293
Cod and cod liver oil† ...	5.4	149	14	5.4	149	14		
Other and unclassified fish and marine animal oils, etc. ...	9.9	237	22	14.2	370	31	10.7	322
TOTAL—Fish and marine animal oils ...	...	1,301	...	...	1,434	...	...	615

Kind of product	1930						1924	
	Returned on schedules for						Total	
	The Oil and Tallow Trade			All trades				
	Quantity	Value	Ent-ries	Quantity	Value	Ent-ries	Quantity	Value
Th. tons	£'000	No.	Th. tons	£'000	No.	Th. tons	£'000	
Other oils (except petroleum and vegetable and seed oils) ...	10.1	273	22	11.8	313	27	30.0	839
... ..	*	29	2	*	38	5	*	209
Lard compound	33.5	1,428	13	44.4	1,901	22	25.1†	1,507‡
TOTAL— PRINCIPAL PRODUCTS	...	12,182	...	...	14,293	...	...	11,920

* Quantity not stated.

† Consisting of "Animal fats and tallow" :—

	Th. tons	£'000
Crude	32.1	1,083
Refined	30.8	1,639
Not separately distinguished ... ..	...	585

‡ So far as separately recorded.

Prices.—The average selling values of the principal classes of oils and fats in 1930 and 1924, as calculated from the Census returns, are shown in the following table. It should be borne in mind that these comparisons do not take account of any changes that may have occurred since the earlier year in the quality or description of the products included under the specified headings :—

Kind of product	Average value		1930 as a percentage of 1924
	1930	1924	
	£ per ton	£ per ton	Per cent.
Lubricating oils, mixed, including greases	24.76	24.90	99.4
Animal oils, fats and greases :—			
Tallow, not refined	27.45	33.76*	81.3
Refined tallow and oleo-margarine and oleo oil	60.07		
Other oils, etc. (except lard, stearine, dripping, suet and other edible animal fats)†	37.65	53.13†	70.9
Stearine	41.13	38.07	108.0
Fish and marine animal oils, fats and greases (refined and unrefined) :—			
Whale oil	30.40	33.42	91.0
Cod and cod liver oil	27.47	29.58	92.9
Other oils, etc.‡	26.08	29.95	87.1
Other oils (except petroleum and vegetable and seed oils)	26.62	27.96	95.2
Lard compound	42.79	60.64	70.1

* Animal fats and tallow, crude.

† Including some unclassified oils, etc. in each year.

‡ Animal fats and tallow, refined.

Volume of production in 1930 and 1924.—The following table compares the volume of production in 1930 and 1924 of lubricating and other oils and fats of the kinds specified :—

Kind of product	Total production			1930 as a percentage of 1924
	1930	1924		
	As returned	As returned	At 1930 average values	
	£'000	£'000	£'000	Per cent.
Lubricating oils, mixed, including greases	8,327	5,221	5,190	160
Animal oils, fats and greases (refined and unrefined) :—				
Stearine	298	222	240	124
Other and unclassified (except lard, dripping, suet, and other edible animal fats)	1,982	3,307†	2,481	80
Fish and marine animal oils, fats and greases (refined and unrefined) :—				
Whale oil	915	293	267	343
Other and unclassified	519	322	281	185
Other oils (except petroleum and vegetable and seed oils)	351	1,048	998	35
Lard compound	1,901	1,507*	1,056	...
TOTAL	14,293	11,920	10,513	136

* So far as separately recorded.

† This may include lard, dripping, etc.

Production, exports and imports.—The following table shows, in relation to production, the quantities of the principal classes of animal and fish oils, fats and greases, exported from the United Kingdom in 1930 and 1924, together with the quantities imported and retained. As regards the 1930 figures of production, the deficiencies referred to on page 363 of this report should be borne in mind; the figures for 1924 include the output of firms in Northern Ireland and, in addition, the output of the small firms.

Kind of product	Production	Exports	Proportion of production exported	Retained imports	Available for use in the United Kingdom	Share of home market held by British products	
							Th. tons
Lubricating oils, mixed, including greases ...	1930	344*	30*	9	†	314*	100
	1924	246*	5*	2	2*	243*	99
Animal oils, fats and greases (except marine animal):—							
Tallow, not refined ...	1930	14.1	4.1	29.1	29.5	39.5	25.3
	1924	†	10.3	...	36.4	...	...
Refined tallow and oleo margarine and oleo oil ...	1930	13.7||	1.6	11.7	30.8	42.9	28.2
	1924	†	5.4	...	27.3	...	...
Other and unclassified oils, fats and greases except lard and stearine ...	1930	28.9	11.3	39.1	7.4	25.0	70.4
	1924	†	12.4	...	5.9	...	...
Stearine ...	1930	7.2	2.7	37.5	0.9	5.4	83.3
	1924	5.7	2.1	36.8	3.1	6.7	53.7
Fish and marine animal oils, fats and greases (refined and unrefined):							
Whale oil ...	1930	30.1	5.6	18.6	82.4	106.9	22.9
	1924	9.0	4.3	47.8	31.3	36.0	13.1
Other sorts (including cod liver oil) ...	1930	19.6	11.0	56.1	16.9	25.5	33.7
	1924	11.9	10.0	84.0	10.4	12.3	15.4
Lard compound ...	1930	44.4	3.0	6.8	3.6	45.0	92.0
	1924	25.2§	2.2	...	4.0	...	...

* Estimated weight; gallons have been converted to tons at the rate of 245 gallons to the ton.

† Negligible.

‡ Separate figures not available. The production of "Animal fats and tallow" recorded for 1924 was as follows:—

	Th. tons	£'000
Crude ...	36.0	1,246
Refined ...	40.7	2,083
Not separately distinguished ...	...	699

|| Including an estimate of the weight of refined tallow, etc., returned by value only.

§ So far as recorded separately.

Work done for the trade or on commission.—The total amount recorded as received for work done for the trade in 1930 was £14,000, the corresponding total for 1924 being £11,000.

Other products.—In addition to the output shown in the table of principal products on pages 365-6, the following goods were produced in 1930 and 1924 by firms that made their returns on

schedules for the Oil and Tallow Trade. 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
Dripping, suet and other edible animal fats ...	220	*
Lard (not including lard compound) ...	267	*
Vegetable and seed oils:—		
Refined ...	2,735	2,812
Unrefined ...	193	
Bones:—		
For manufacturing purposes ...	67	50
For manure ...	21	35
Feeding stuffs for animals and poultry:—		
Fish meal ...	129	299
Other feeding stuffs ...	151	104
Fertilisers ...	51	98
Other goods ...	342	475†
TOTAL ...	4,176	3,873

* Not separately recorded.

† Including £175,000 in respect of petroleum products.

Waste products sold.—Sales of greaves, cracklings and other waste products recorded by firms in the Oil and Tallow Trade amounted to £74,000 in 1930 and £36,000 in 1924.

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)	262	4,145	103	651	365	4,796
Administrative, technical and clerical staff (as at 18th October) ...	191	2,454	122	831	313	3,285
TOTAL ...	453	6,599	225	1,482	678	8,081
1924						
Operatives (average for the year)	180	3,992	66	271	246	4,263
Administrative, technical and clerical staff (as at 18th October) ...	109	1,564	57	476	166	2,040
TOTAL ...	289	5,556	123	747	412	6,303

Wages.—The available information as to the amount of wages paid in 1930 and 1924 is given on pages 252 and 253.

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	5,128	682	5,810	4,306	426	4,732
Steam turbines	105	—	105	—	—	—
Internal combustion engines :—						
Gas	519	110	629	727	190	917
Petrol, kerosene, or other light oils ...	81	6	87	26	—	26
Heavy oils	111	50	161	—	—	—
Water engines	—	—	—	20	—	20
TOTAL	5,944	848	6,792	5,079	616	5,695
ELECTRIC GENERATORS						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines	3,059	205	3,264	787	28	815
Steam turbines	15	—	15	—	—	—
Internal combustion engines :—						
Gas	22	62	84	95	—	95
Petrol, kerosene, or other light oils	2	—	2	—	—	—
Heavy oils	15	32	47	—	—	—
Water engines	—	—	—	8	—	8
TOTAL	3,113	299	3,412	890	28	918
ELECTRIC MOTORS						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works ...	2,347	203	2,550	1,005	10	1,015
Electricity generated in other works under same ownership	848	700	1,548	—	—	—
Purchased electricity	7,124	690	7,814	3,673	294	3,967
TOTAL	10,319	1,593	11,912	4,678	304	4,982

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	35,283	69,476*	2,471
Coke	1,348	4,989*	300
Electricity used for all purposes :—			B.T.U. (Kw.-hrs.) '000
Generated in same works			3,051
Generated in other works under same ownership			10,429
Purchased			6,200
TOTAL—Electricity			19,680

* These figures were recorded by firms representing 73·7 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 of work done (Gross output)	£'000	15,495	951	16,446
Cost of materials used	„	10,738	756	11,494
Paid for work given out to other firms	„	2	*	2
Net output	„	4,755	195	4,950
Average number of persons employed	No.	7,308	773	8,081
Net output per person employed	£	651	253	613
Power available :—				
Prime movers	H.P.	5,093	1,699	6,792
Electric motors driven by purchased electricity	„	7,027	787	7,814

* Less than £500.

II.—Production

Kind of products and work done	Unit	England and Wales	Scotland	Great Britain
Lubricating oils, mixed, including greases :—				
Returned in tons	<i>Th. tons</i>	242.1	7.8	249.9
Returned in gallons	<i>Th. gals.</i>	17,150	301	17,451
Returned in tons	£'000	5,942	147	6,089
Returned in gallons	£'000	1,540	33	1,573
Animal oils, fats and greases (except marine animal) :—				
Tallow, not refined	<i>Th. tons.</i>	11.2	0.6	11.8
Refined tallow and oleo-margarine and oleo oil } <i>Quantity stated</i>	£'000	304	16	320
Other and unclassified oils, fats and greases (except lard, dripping, suet and stearine)	<i>Th. tons.</i>	10.4	0.3	10.7
Stearine	£'000	635	12	647
Other and unclassified oils, fats and greases (except lard, dripping, suet and stearine)	£'000	166	—	166
Stearine	<i>Th. tons.</i>	8.5	1.5	10.0
Stearine	£'000	185	40	225
Stearine	<i>Th. tons.</i>	*	*	4.0
Stearine	£'000	*	*	131
Fish and marine animal oils, fats and greases (refined and unrefined) :—				
Whale oil	<i>Th. tons</i>	*	*	30.1
Whale oil	£'000	*	*	915
Cod and cod liver oil†	<i>Th. tons</i>	*	*	5.4
Cod and cod liver oil†	£'000	*	*	149
Other and unclassified fish and marine animal oils, etc.	<i>Th. tons</i>	2.6	7.3	9.9
Other and unclassified fish and marine animal oils, etc.	£'000	57	180	237

Kind of products and work done	Unit	England and Wales	Scotland	Great Britain
Other oils (except petroleum and vegetable and seed oils)	<i>Th. tons</i>	9.5	0.6	10.1
<i>Quantity stated</i>	£'000	258	15	273
<i>Quantity not stated</i>	£'000	29	—	29
Lard compound	<i>Th. tons</i>	30.3	3.2	33.5
Lard compound	£'000	1,275	153	1,428
Dripping, suet and other edible animal fats	£'000	195	25	220
Lard (not including lard compound)	<i>Th. tons</i>	*	*	4.7
Lard (not including lard compound)	£'000	*	*	267
Vegetable and seed oils :—				
Refined	<i>Th. tons</i>	77.2	1.1	78.3
Refined	£'000	2,709	26	2,735
Unrefined	<i>Th. tons</i>	5.5	—	5.5
Unrefined	£'000	193	—	193
Bones :—				
For manufacturing purposes	<i>Th. tons</i>	*	*	8.9
For manufacturing purposes	£'000	*	*	67
For manure	<i>Th. tons</i>	*	*	3.8
For manure	£'000	*	*	21
Feeding stuffs for animals and poultry :—				
Fish meal	<i>Th. tons</i>	*	*	7.8
Fish meal	£'000	*	*	129
Other feeding stuffs	<i>Th. tons</i>	10.6	0.8	11.4
Other feeding stuffs	£'000	141	10	151
Fertilisers	£'000	28	23	51
Other goods made	„	293	49	342
Greaves, cracklings and other waste products sold	„	67	7	74
Work done on commission or for the trade	„	14‡	—	14‡
TOTAL VALUE OF PRODUCTS AND OF WORK DONE (GROSS OUTPUT)	£'000	15,495	951	16,446

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

† So far as recorded separately.

‡ Amount received.

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	257	3,698	102	600	359	4,298
Administrative, etc.* ...	186	2,299	116	763	302	3,062
TOTAL	443	5,997	218	1,363	661	7,360
<i>Scotland :—</i>						
Operatives	6	455	1	52	7	507
Administrative, etc.* ...	5	155	6	68	11	223
TOTAL	11	610	7	120	18	730
<i>Great Britain :—</i>						
Operatives	263	4,153	103	652	366	4,805
Administrative, etc.* ...	191	2,454	122	831	313	3,285
TOTAL	454	6,607	225	1,483	679	8,090

* 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 ...	4,286	510	4,796	July 19 ...	4,059	691	4,750
Feb. 15 ...	4,303	516	4,819	Aug. 16 ...	4,222	717	4,939
Mar. 15 ...	4,229	499	4,728	Sept. 13 ...	4,266	519	4,785
April 12 ...	4,214	510	4,724	Oct. 18 ...	4,298	507	4,805
May 17 ...	4,227	522	4,749	Nov. 15 ...	4,339	475	4,814
June 21 ...	4,186	681	4,867	Dec. 13 ...	4,317	456	4,773
AVERAGE FOR THE TWELVE MONTHS					4,246	550	4,796

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	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Steam turbines	3,856	382	1,272	300	5,128	682
Internal combustion engines :—	103	—	2	—	105	—
Gas	449	80	70	30	519	110
Petrol, kerosene, or other light oils ...	81	6	—	—	81	6
Heavy oils	86	50	25	—	111	50
TOTAL	4,575	518	1,369	330	5,944	848
TOTAL OF PRIME MOVERS INSTALLED	5,093		1,699		6,792	
ELECTRIC GENERATORS						
Driven by	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines	2,599	40	460	165	3,059	205
Steam turbines	15	—	—	—	15	—
Internal combustion engines :—						
Gas	22	62	—	—	22	62
Petrol, kerosene, or other light oils	2	—	—	—	2	—
Heavy oils	—	32	15	—	15	32
TOTAL	2,638	134	475	165	3,113	299
TOTAL OF ELECTRIC GENERATORS INSTALLED	2,772		640		3,412	
ELECTRIC MOTORS						
Driven by	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Electricity generated in same works ...	1,694	123	653	80	2,347	203
Electricity generated in other works under same ownership	848	700	—	—	848	700
Purchased electricity	6,415	612	709	78	7,124	690
TOTAL	8,957	1,435	1,362	158	10,319	1,593
TOTAL OF ELECTRIC MOTORS INSTALLED	10,392		1,520		11,912	

V.—Consumption of fuel

Kind of fuel used	England and Wales	Scotland	Great Britain
	Tons	Tons	Tons
Coal used for power*	29,410	5,873	35,283
Coke used for power*	1,348	—	1,348
	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	2,319	732	3,051
Generated in other works under same ownership	10,429	—	10,429
Purchased	5,847	353	6,200
TOTAL—Electricity	18,595	1,085	19,680

* In addition, 2,471 tons of coal and 300 tons of coke (all in England and Wales) were recorded as used for power and for other purposes, not separately distinguished.