

## THE FISH CURING TRADE.

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### Introductory.\*

The Tables on pages 124 to 129 are based on Returns received from firms in Great Britain and Northern Ireland whose business in 1924 consisted wholly or mainly in the curing of fish. The number of such separate Returns was 645. About 330 firms to which schedules were sent did not furnish Returns, but these firms for the most part had very small establishments and included a number that ceased operations in the course of the censal year. On the basis of the information available it is estimated that they did not employ more than 950 persons and that their net output did not exceed £100,000.

*Summary of results.*—The following table shows the main results of the Censuses of 1924 and 1907, comparisons between the figures for the two years being subject to the qualifications mentioned in the next paragraph. The particulars obtained in connexion with the Census of 1912 were not sufficiently complete to warrant their being used for purposes of comparison, both for reasons similar to those indicated on the next page and on account of the important proportion of the persons occupied in the trade who were employed by the small firms exempted in that year.

\* See also the notes on pages vii-xiv.



Particulars.	Unit.	1924.	1907.
Value of products (Gross output) .. ..	£'000	8,250	3,723
Cost of materials used .. ..	"	6,436	2,955
Net output .. ..	"	1,814	768
Average number of persons employed .. ..	No.	9,762	25,308
Net output per person employed .. ..	£	186	30
Net output per person employed .. ..	H.P.	555	177
Mechanical power available :—	"	894	(not recorded)
Prime movers .. ..	"		
Electric motors driven by purchased electricity .. ..	"		

*Qualifications affecting comparisons.*—In considering the above table and the other tables in this Report which show figures for the two censal years, the following qualifications should be borne in mind :—

(1) The comparability of figures relating to value or cost is affected by the changes which have taken place in the general purchasing power of money.

(2) The Census of 1907 covered the whole of Great Britain and Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. The output in 1907 in the whole of Ireland was, however, valued at only £56,000.

(3) Neither the 1907 results nor the 1924 results cover all establishments engaged in the curing of fish, although the large majority of the more important firms are believed to have furnished Returns. The industry includes, however, many small firms that maintain one curing station only, and do not carry on business for more than a few weeks during the year. A large number of curing establishments were found to be unoccupied at the date of issue of the Census schedules and, though Returns were in some cases obtained by a subsequent re-issue of schedules, there remained a considerable residue of firms, probably small, from which no records of their business were obtained.

(4) The number of persons shown for the year 1907 is probably much exaggerated owing to the fact that the majority of firms furnished separate statements of the number of persons "ordinarily employed" in their curing businesses in respect of each station during the year. In the herring curing trade persons engaged in gutting, packing, etc., are commonly transferred from station to station, remaining for the period of the fishing season at each station and the method of record adopted for 1907 resulted in the inclusion of the same individuals in the Returns of more than one curing station. For 1924 firms were instructed to furnish a statement of the number employed at each station in each month of the year, and the average of these twelve monthly statements is free from similar duplication. There are no means of calculating the extent of the over-statement contained in the 1907 figure.

### Production.

The detailed information relating to the output of the Fish Curing Trade in 1924 will be found in Table II on page 125.

*Output of cured fish.*—The following statement shows, for the censal years 1924 and 1907, the value and the quantity of the different kinds of fish cured, the figures for both years being inclusive of a small output of cured herrings returned on schedules for trades other than the Fish Curing Trade.

Kind of products.	1924.		1907.	
	Quantity.	Selling value.	Quantity.	Selling value.
	Th. cwts.	£'000		£'000
Fish, cured, smoked or salted :—				
Herrings .. ..	6,062*	5,043*	Th. cwts. † 832	440†
			Th. barrels. 2,118	2,221
Pilchards .. ..	56	74	Th. cwts. 10	8
			Th. hogsheads. 11	30
Haddocks .. ..	512	1,308	Th. cwts. 938	716
Cod (including codlings) .. ..	534	934	} 393	307
Other sorts .. ..	357	523		
Fish, not separately distinguished	114	292	—	—
<b>TOTAL VALUE OF FISH CURED .. ..</b>	<b>..</b>	<b>8,174</b>	<b>..</b>	<b>3,722</b>

\* Including 6,000 cwts. of herrings, valued at £6,000, returned on schedules for other trades.

† Including 18,000 cwts. of herrings, valued at £10,000, returned on schedules for other trades.

The above totals are free from duplication.

As already stated many firms in this industry maintain curing stations at different fishing centres around the coast of Great Britain, and it was frequently found that firms did not maintain separate records of the business done at each curing station. In such cases it was not possible to obtain separate data relating to production in England and Wales and in Scotland, and the tables appearing on pages 124-129 include an allocation, as between England and Scotland, of rather less than 24 per cent. of the output (by value), which is based, in part, on the distribution of employment throughout the year in each country, and, in part, on the information contained in the Annual Reports of the Ministry of Agriculture and Fisheries and the Fishery Board for Scotland for the year 1924.

The total quantity of herrings cured in the censal year 1907 may be estimated as 6,959,000 cwts. The quantity returned in respect of the censal year 1924 was 6,062,000 cwts., or 12·9 per cent. below the 1907 figure. There was also in 1924 a reduction of 45·4 per cent. in the quantity of haddocks cured, but a considerable increase in the quantity of other fish cured.



The Statistical Tables issued by the Fishery Board for Scotland for the year 1925 furnish the following particulars of the quantities of herrings landed in Scotland by British vessels :

	1924.	1925.
Herrings landed :—	cwts.	cwts.
First three months .. ..	904,000	344,000
First six months .. ..	2,178,000	795,000

*Other products.*—In addition to the output shown in the table on page 119, firms that made their returns on schedules for the Fish Curing Trade in 1924 also recorded an output of other fish products, including waste products, valued at £42,000 and of casks and boxes, including repairs, valued at £40,000. These goods, being of kinds mainly produced by other trades, are dealt with in the Reports on those trades. The corresponding total figure for 1907 was £11,000.

*Cost of materials.*—The cost of fish, casks, boxes, and other purchased materials used by firms making their Returns on schedules for the Fish Curing Trade was returned as £6,436,000 in 1924 ; the corresponding figure for 1907 was £2,955,000.

*Net output.*—The net output in 1924 of the firms making their Returns on schedules for the Fish Curing Trade (whose gross output was valued at £8,250,000) was £1,814,000, that sum representing, without duplication, the total amount by which the value of the aggregate output exceeded the cost of the fish and other materials used.

The net output per head of persons employed in the censal year 1924 was £186 as compared with £30 (see, however, qualification (4) on page 118) in 1907.

*Quantity of fresh fish used.*—Fish-curers were asked to state the weights, in the fresh state, of the fish cured, smoked, or dried by them in 1924. This information was furnished by firms with an output of cured fish valued at £1,910,000, or only about 23 per cent. of the output of the trade as a whole.

The particulars supplied are summarised below :—

Kind of fish.	Weight in the	Weight as cured,
	fresh state.	smoked or salted.
	cwts.	cwts.
Herrings .. ..	959,516	812,211
Cod .. ..	298,648	171,713
Haddocks .. ..	363,937	241,489
Other sorts .. ..	164,675	74,612
TOTAL .. ..	1,786,776	1,300,025

In this sample the loss of weight due to the curing, smoking or salting processes was, for herrings about 15 per cent. ; for cod, about 43 per cent. ; for haddocks, about 34 per cent. ; and, for other

sorts of fish, about 55 per cent. These proportions may, however, not be representative of average actual conditions and to draw any general conclusions from so small a sample may not be justifiable.

*Exports and imports.*—Many important curing establishments in Scotland furnished Returns to the Census office in respect of a twelve-month period which covered the earlier months of 1925, in which, as the figures on page 120 show, the quantity of herrings landed was very considerably lower than in the corresponding period of 1924. The output of cured fish as returned to the Census office should, therefore, not be regarded as expressing the total production in the calendar year 1924, and cannot be closely related to the figures of exports and imports in that year.

The exports and net imports of the different kinds of fish in the calendar year 1924 were, however, as follows :—

Kind of fish.	Exports.	Net imports.
	Th. cwts.	Th. cwts.
Fish cured or salted, not canned :—		
Herrings .. ..	6,390	66
Cod .. ..	404	144
Haddocks .. ..	27	1
Pilchards .. ..	52	} 127
Other sorts .. ..	156	

#### Wages in 1924.

Under the Census of Production Act, 1906, the powers of the Board of Trade to require information do not extend to particulars of the amount of wages paid, and, consequently, no information on this head was secured in connexion with the Census of 1924. As a result, however, of the voluntary enquiry undertaken by the Ministry of Labour into wages and hours in the United Kingdom in 1924, information was obtained as to the total wage-bill of a group of firms in the Fish Curing Trade which made Returns both to the Ministry of Labour and to the Census of Production office. According to the Census records this group of firms employed, in the week ended 18th October, 1924, 4,379 operatives, or 36 per cent. of the total of 12,104 operatives for the trade as a whole, and their net output totalled £819,000, or 45 per cent. of the aggregate net output of £1,814,000 for the trade as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £418,000, representing about 51 per cent. of their aggregate net output.

#### Employment.

The detailed information relating to employment in 1924 is summarised in Table III on pages 126–128. The following table sets out certain particulars for that year together with those obtained for the 1907 Census. For the purpose of this comparison, the average



numbers of operatives of each sex returned for 1924 have been divided between the two age-groups in the proportions shown by the data relating to the week ended 18th October :—

Average number.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
	<b>1924.</b>					
Operatives .. ..	321	3,712	207	4,951	528	8,663
Administrative, etc. ..	33	898	23	201	56	1,099
<b>TOTAL .. ..</b>	<b>354</b>	<b>4,610</b>	<b>230</b>	<b>5,152</b>	<b>584</b>	<b>9,762</b>
<b>1907.</b>						
Wage earners .. ..	619	6,133	496	18,399	1,115	24,532
Salaried .. ..	13	713	7	63	20	776
<b>TOTAL .. ..</b>	<b>632</b>	<b>6,846</b>	<b>503</b>	<b>18,462</b>	<b>1,135</b>	<b>25,308</b>

The numbers of operatives recorded month by month in 1924 ranged from 3,441 above the average, in October, to 2,991 below the average, in January. (See Table IIIB, pages 127-128, in which the seasonal variations and the difference between the periods of active operation of herring curing establishments in Scotland (June-August) and in England and Wales (October-November) are clearly reflected.)

#### Mechanical Power.

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 129. The following table sets out the particulars for 1924 and for 1907 relating to the capacity and kinds of *prime movers* and the capacity of *electric generators* installed.

Power equipment.	1924.			1907.
	Ordinarily in use.	In reserve or idle.	Total.	Total.
<b>PRIME MOVERS :—</b>	H.P.	H.P.	H.P.	H.P.
Reciprocating steam engines ..	139	8	147	93
Gas engines .. ..	369	8	377	} 84
Petrol and light oil engines ..	5	—	5	
Heavy oil engines .. ..	26	—	26	
<b>TOTAL .. ..</b>	<b>539</b>	<b>16</b>	<b>555</b>	<b>177</b>
<b>ELECTRIC GENERATORS :—</b>	Kw.	Kw.	Kw.	Kw.
Driven by—				
Reciprocating steam engines ..	2	—	2	—
Gas engines .. ..	3	—	3	—
<b>TOTAL .. ..</b>	<b>5</b>	<b>—</b>	<b>5</b>	<b>—</b>

The capacity of *electric motors* recorded in 1924 was as shown below :—

Electric motors.	1924.		
	Ordinarily in use.	In reserve or idle.	Total.
	H.P.	H.P.	H.P.
Driven by—			
Electricity generated in own works ..	22	—	22
Purchased electricity .. ..	790	104	894

Corresponding information was not required for 1907. The total number of Board of Trade units of electricity purchased for power and lighting purposes in that year was returned as 4,000.



## TABLES.

## I.—Summary of results.

## (i) As returned to the Census office.

Particulars.	Unit.	England and Wales and N. Ireland.*	Scotland.	England and Wales and Scotland n.s.d.†	United Kingdom.
Value of products (Gross output)	£'000	3,794	2,490	1,966	8,250
Cost of materials used .. .. .	"	2,970	1,906	1,560	6,436
Net output .. .. .	"	824	584	406	1,814
Average number of persons employed .. .. .	No.	4,103	3,478	2,181	9,762
Net output per person employed	£	201	168	186	186
Mechanical power available :—					
Prime movers .. .. .	H.P.	159	338	58	555
Electric motors driven by purchased electricity .. .. .	"	722	147	25	894

\* In order to avoid the disclosure of information relating to individual firms, the figures for Northern Ireland have been combined with those for England and Wales.  
† Not separately distinguished.

## (ii) With an apportionment between England and Scotland of the figures shown in column 5 above (see page 119).

Particulars.	Unit.	England and Wales and N. Ireland.*	Scotland.	United Kingdom.
Value of products (Gross output) ..	£'000	4,589	3,661	8,250
Cost of materials used .. .. .	"	3,578	2,858	6,436
Net output .. .. .	"	1,011	803	1,814
Average number of persons employed ..	No.	4,959	4,803	9,762
Net output per person employed ..	£	204	167	186
Mechanical power available :—				
Prime movers .. .. .	H.P.	194	361	555
Electric motors driven by purchased electricity .. .. .	"	737	157	894

\* See footnote to Table I(i).

## II.—Production.

## (i) As returned to the Census Office.

Kind of products.	Unit.	England and Wales and N. Ireland.†	Scotland.	England and Wales and Scotland, n.s.d.	United Kingdom.
Fish cured, smoked or salted :—					
Herrings .. .. .	Th. cwts.	1,994	1,781	2,281	6,056
	£'000	1,930	1,402	1,705	5,037
Pilchards .. .. .	Th. cwts.	56	—	—	56
	£'000	74	—	—	74
Cod (including codlings)	Th. cwts.	349	177	8	534
	£'000	606	314	14	934
Haddocks .. .. .	Th. cwts.	279	208	25	512
	£'000	744	517	47	1,308
Other sorts .. .. .	Th. cwts.	200	146	11	357
	£'000	298	201	24	523
Fish, not separately distinguished.	Th. cwts.	42	6	66	114
	£'000	112	15	165	292
Other fish products, including waste products .. .. .	£'000	*	*	*	42
Casks and boxes, made and repaired.	"	*	*	*	40
TOTAL VALUE OF PRODUCTS (GROSS OUTPUT) .. .. .	£'000	3,794	2,490	1,966	8,250

\* In order to avoid the possible disclosure of information relating to individual firms, figures can only be given for the United Kingdom as a whole.  
† See footnote to Table I(i).

## (ii) With an apportionment between England and Scotland of the figures shown in column 5 above (see page 119).

Kind of products.	Unit.	England and Wales and N. Ireland.†	Scotland.	United Kingdom.
Fish cured, smoked and salted :—				
Herrings .. .. .	Th. cwts.	2,884	3,172	6,056
	£'000	2,595	2,442	5,037
Pilchards .. .. .	Th. cwts.	56	—	56
	£'000	74	—	74
Cod (including codling) .. .. .	Th. cwts.	353	181	534
	£'000	613	321	934
Haddocks .. .. .	Th. cwts.	291	221	512
	£'000	767	541	1,308
Other sorts .. .. .	Th. cwts.	205	152	357
	£'000	310	213	523
Fish, not separately distinguished ..	Th. cwts.	75	39	114
	£'000	194	98	292
Other fish products, including waste products .. .. .	£'000	*	*	42
Casks and boxes, made and repaired ..	£'000	*	*	40
TOTAL VALUE OF PRODUCTS (GROSS OUTPUT) .. .. .	£'000	4,589	3,661	8,250

\* See footnote (\*) to Table II(i).

† See footnote to Table I(i).



## III.—Employment.

## A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER 1924.

(i) As returned to the Census office.

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales and N. Ireland :—*</i>						
Operatives .. ..	258	2,881	153	4,251	411	7,132
Administrative, etc.†	21	512	8	72	29	584
TOTAL .. ..	279	3,393	161	4,323	440	7,716
<i>Scotland :—</i>						
Operatives .. ..	64	766	128	1,089	192	1,855
Administrative, etc.†	3	222	8	104	11	326
TOTAL .. ..	67	988	136	1,193	203	2,181
<i>England and Wales and Scotland, n.s.d. :—</i>						
Operatives .. ..	65	829	37	2,288	102	3,117
Administrative, etc.†	9	164	7	25	16	189
TOTAL .. ..	74	993	44	2,313	118	3,306
<i>United Kingdom :—</i>						
Operatives .. ..	387	4,476	318	7,628	705	12,104
Administrative, etc.†	33	898	23	201	56	1,099
TOTAL .. ..	420	5,374	341	7,829	761	13,203

\* See footnote to Table I (i). † Administrative, technical and clerical staff.

(ii) With an apportionment between England and Scotland of the figures not separately distinguished (see page 119).

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales and N. Ireland :—*</i>						
Operatives .. ..	315	3,608	186	6,256	501	9,864
Administrative, etc.†	21	512	8	72	29	584
TOTAL .. ..	336	4,120	194	6,328	530	10,448
<i>Scotland :—</i>						
Operatives .. ..	72	868	132	1,372	204	2,240
Administrative, etc.†	12	386	15	129	27	515
TOTAL .. ..	84	1,254	147	1,501	231	2,755
<i>United Kingdom :—</i>						
Operatives .. ..	387	4,476	318	7,628	705	12,104
Administrative, etc.†	33	898	23	201	56	1,099
TOTAL .. ..	420	5,374	341	7,829	761	13,203

\* See footnote to Table I (i). † Administrative, technical and clerical staff.

## B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924.

(i) As returned to the Census office.

*England and Wales and N. Ireland.\** (Annual average : Males, 1,834 ; Females, 1,685 ; Total, 3,519.)

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	1,471	856	2,327	July 19th ..	1,561	1,147	2,708
Feb. 16th ..	1,443	869	2,312	Aug. 16th ..	1,680	1,435	3,115
March 15th ..	1,561	1,086	2,647	Sept. 13th ..	1,930	1,768	3,698
April 12th ..	1,584	1,089	2,673	Oct. 18th ..	2,881	4,251	7,132
May 17th ..	1,556	1,070	2,626	Nov. 15th ..	2,793	4,104	6,897
June 21st ..	1,563	1,151	2,714	Dec. 13th ..	1,980	1,401	3,381

*Scotland.* (Annual average : Males, 1,150 ; Females, 2,002 ; Total, 3,152.)

Jan. 12th ..	1,065	1,257	2,322	July 19th ..	1,596	4,483	6,079
Feb. 16th ..	1,056	1,524	2,580	Aug. 16th ..	1,491	4,060	5,551
March 15th ..	1,053	1,403	2,456	Sept. 13th ..	1,127	1,341	2,468
April 12th ..	1,124	1,109	2,233	Oct. 18th ..	766	1,089	1,855
May 17th ..	1,208	1,500	2,708	Nov. 15th ..	717	1,084	1,801
June 21st ..	1,579	3,978	5,557	Dec. 13th ..	1,017	1,188	2,205

*England and Wales and Scotland, n.s.d.* (Annual average : Males, 728 ; Females, 1,264 ; Total, 1,992.)

Jan. 12th ..	616	407	1,023	July 19th ..	814	2,449	3,263
Feb. 16th ..	630	537	1,167	Aug. 16th ..	828	2,426	3,254
March 15th ..	652	383	1,035	Sept. 13th ..	709	989	1,698
April 12th ..	661	259	920	Oct. 18th ..	829	2,288	3,117
May 17th ..	687	486	1,173	Nov. 15th ..	842	2,331	3,173
June 21st ..	811	2,254	3,065	Dec. 13th ..	660	355	1,015

*United Kingdom.* (Annual average : Males, 3,712 ; Females, 4,951 ; Total, 8,663.)

Jan. 12th ..	3,152	2,520	5,672	July 19th ..	3,971	8,079	12,050
Feb. 16th ..	3,129	2,930	6,059	Aug. 16th ..	3,999	7,921	11,920
March 15th ..	3,266	2,872	6,138	Sept. 13th ..	3,766	4,098	7,864
April 12th ..	3,369	2,457	5,826	Oct. 18th ..	4,476	7,628	12,104
May 17th ..	3,451	3,056	6,507	Nov. 15th ..	4,352	7,519	11,871
June 21st ..	3,953	7,383	11,336	Dec. 13th ..	3,657	2,944	6,601

\* See footnote to Table I (i).



(ii) With an apportionment between England and Scotland of the figures not separately distinguished (see page 119).

England and Wales and N. Ireland.\* (Annual average: Males, 2,195; Females, 2,180; Total, 4,375.)

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	1,703	1,004	2,707	July 19th ..	1,793	1,295	3,088
Feb. 16th ..	1,675	1,017	2,692	Aug. 16th ..	1,912	1,583	3,495
March 15th ..	1,793	1,234	3,027	Sept. 13th ..	2,381	2,397	4,778
April 12th ..	1,816	1,237	3,053	Oct. 18th ..	3,608	6,256	9,864
May 17th ..	1,788	1,218	3,006	Nov. 15th ..	3,533	6,152	9,685
June 21st ..	1,795	1,299	3,094	Dec. 13th ..	2,538	1,473	4,011

Scotland. (Annual average: Males, 1,517; Females, 2,771; Total, 4,288.)

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	1,449	1,516	2,965	July 19th ..	2,178	6,784	8,962
Feb. 16th ..	1,454	1,913	3,367	Aug. 16th ..	2,087	6,338	8,425
March 15th ..	1,473	1,638	3,111	Sept. 13th ..	1,385	1,701	3,086
April 12th ..	1,553	1,220	2,773	Oct. 18th ..	868	1,372	2,240
May 17th ..	1,663	1,838	3,501	Nov. 15th ..	819	1,367	2,186
June 21st ..	2,158	6,084	8,242	Dec. 13th ..	1,119	1,471	2,590

United Kingdom. (Annual average: Males, 3,712; Females, 4,951; Total, 8,663.)

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	3,152	2,520	5,672	July 19th ..	3,971	8,079	12,050
Feb. 16th ..	3,129	2,930	6,059	Aug. 16th ..	3,999	7,921	11,920
March 15th ..	3,266	2,872	6,138	Sept. 13th ..	3,766	4,098	7,864
April 12th ..	3,369	2,457	5,826	Oct. 18th ..	4,476	7,628	12,104
May 17th ..	3,451	3,056	6,507	Nov. 15th ..	4,352	7,519	11,871
June 21st ..	3,953	7,383	11,336	Dec. 13th ..	3,657	2,944	6,601

\* See footnote to Table I (i).

#### IV.—Mechanical Power.

##### PARTICULARS OF PRIME MOVERS, ELECTRIC GENERATORS AND ELECTRIC MOTORS.

(Note.—The power returned by those firms that did not distinguish between their English and Scottish establishments was so small, viz.: prime movers, 58 H.P., and electric motors driven by purchased electricity, 25 H.P., that it is not shown separately in the following table but has been apportioned between England and Scotland.)

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.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
PRIME MOVERS :—						
Reciprocating steam engines .. ..	97	8	42	—	139	8
Gas engines .. ..	41	8	328	—	369	8
Petrol and light oil engines .. ..	—	—	5	—	5	—
Heavy oil engines .. ..	26	—	—	—	26	—
TOTAL .. ..	164	16	375	—	539	16
TOTAL OF PRIME MOVERS INSTALLED .. ..	180		375		555	
ELECTRIC GENERATORS :—	Kw.	Kw.	Kw.	Kw.	Kw.	Kw.
Driven by :—						
Reciprocating steam engines .. ..	2	—	—	—	2	—
Gas engines .. ..	3	—	—	—	3	—
TOTAL .. ..	5	—	—	—	5	—
ELECTRIC MOTORS :—	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
Driven by—						
Electricity generated in own works .. ..	—	—	22	—	22	—
Purchased electricity	632	100	158	4	790	104

\* No mechanical power was recorded for Northern Ireland.



## THE CATTLE, DOG AND POULTRY FOODS TRADES.

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## Introductory.\*

The Tables on pages 136 to 138 are based on Returns received from firms in Great Britain and Northern Ireland whose business in 1924 consisted wholly or mainly in the manufacture of cattle, dog and poultry foods (except grain-milling products, oil-cake made by seed crushers, and certain by-products of other trades). The number of such separate Returns was 147. Schedules were also sent to 14 firms which did not furnish Returns, but these firms for the most part had very small establishments. On the basis of the information available it is estimated that they did not employ more than 50 persons in all, and that their total net output did not exceed £18,000.

\* See also the Notes on pages vii-xiv.

*Summary of results.*—The following table shows the main results of the Censuses of 1924, 1912 and 1907, comparisons between the figures for the three years being subject to the qualifications mentioned in the next paragraph :—

Particulars.	Unit.	1924.	1912.	1907.
Value of goods made (Gross output) ..	£'000	6,869	2,306	1,441
Cost of materials used .. .. .	"	4,764	1,727	1,128
Net output .. .. .	"	2,105	579	313
Average number of persons employed ..	No.	5,465	3,889	1,983
Net output per person employed ..	£	385	149	158
Mechanical power available :—				
Prime movers .. .. .	H.P.	6,818	5,837	4,596
Electric motors driven by purchased electricity .. .. .	"	8,380	794	(not recorded)

*Qualifications affecting comparisons.*—In considering the above table and the other tables in this Report which show figures for the different censal years, the following qualifications should be borne in mind :—

(1) The comparability of figures relating to value or cost is affected by the changes which have taken place in the general purchasing power of money.

(2) The Censuses of 1907 and 1912 covered the whole of Great Britain and Ireland, but that of 1924 applied only to Great Britain and Northern Ireland. The exclusion of Southern Ireland in 1924 does not sensibly affect the comparability of the figures since, according to the Census of Production taken by the Government of the Irish Free State in respect of the year 1926, there does not appear to have been any substantial production in that country of the characteristic products of these trades.

(3) The Censuses of 1907 and 1924 extended to all firms, however small, but in 1912 firms employing not more than five persons (excluding the proprietors), were merely required to state the average number of persons employed by them in the year. According to the information so furnished the number of persons employed in the establishments thus excluded was 75, or less than 2 per cent. of the number employed by the remaining firms, as shown in the above table.

## Production.

The detailed information relating to the output of the Cattle, Dog and Poultry Foods Trades in 1924 will be found in Table II on page 136.

In addition to the goods dealt with in this Report, poultry foods valued, on a cost basis, at £1,600 were returned in 1924 by Railway Companies.\*

\* Such production falls within the scope of the Report on Public Utility Services, which forms part of a separate volume.



*Principal products.*—The following statement shows, for the three censal years, the value and, where recorded, the quantity of the chief classes of output, including not only the products of firms that made their Returns on schedules for the Cattle, Dog and Poultry Foods Trades, but also similar goods made by firms whose Returns were furnished on schedules for other trades.

Kind of goods.	1924.		1912.	1907.
	Returned on schedules for—		Total.	Total.
	The Cattle, etc., Foods Trades.	All trades.*		
Cattle feeding stuffs (except oil-seed cake)—	£'000	£'000	£'000	£'000
Sweetened (containing molasses) ..	2,886	2,901	} not separately recorded.	
(Th. tons) .. .. .	(308·3)	(309·5)		
Not sweetened .. .. .	1,025	1,929		
(Th. tons) .. .. .	(93·2)	(163·6)		
<b>TOTAL—CATTLE FEEDING STUFFS</b> ..	<b>3,911</b>	<b>4,830</b>	<b>2,146†</b>	<b>1,536†</b>
(Th. tons) .. .. .	(401·5)	(473·1)	(313·6)††	(211·3)†
Dog foods, including biscuits .. .. .	1,010	1,082	360	108
Poultry foods .. .. .	878	898	231	167
Dog and poultry foods, not separately distinguished .. .. .	17	17	64	21
Animal medicines, spices and condiments ..	679	690	117	37
<b>TOTAL VALUE—PRINCIPAL PRODUCTS</b>	<b>6,495</b>	<b>7,517</b>	<b>2,918</b>	<b>1,869</b>

\* Including the Chemical Trades, the Oil and Tallow Trades, the Fertiliser, Glue, etc., Trades, and the Starch, Blue, etc., Trades, the Reports on which form part of a separate volume.

† Including oil-seed cake.

†† Includes 11,300 tons, being the estimated weight of £77,000 worth of cattle feeding stuffs returned, by value only, on schedules for other trades.

The above totals are free from any material duplication.

In 1907 there were included in Returns made on schedules for other trades than those now under review cattle feeding stuffs to the value of £97,000 for which quantities were not stated. This value is included in the total of £1,536,000 given for that year in the above table, but is not represented in the total quantity of 211,300 tons shown. The output of dog foods and biscuits shown as £108,000 for 1907 does not include biscuits made by firms that returned their output on schedules for the Bread and Biscuit Trades; it is known that such firms made at least 21,450 tons of biscuits for animal consumption, valued at £288,000, and there may have been other quantities not specified as for animals. In 1924 firms making dog foods and biscuits to the value of £295,000 stated, in reply to a voluntary question, that the quantity of their output was 15,500 tons, and if this sample may be taken as representative of the whole output (which is open to doubt), the aggregate quantity made was about

53,000 tons. Also, on this occasion, firms making dog biscuits were asked to make their Returns on schedules for the Cattle, Dog and Poultry Foods Trades, and not on those for the Bread and Biscuit Trades. Very large increases are shown in the output of poultry foods and of animal medicines, spices and condiments. As regards poultry foods, the increase may be ascribed largely to the development that has occurred in organised poultry farming since the year 1907, but as regards animal medicines, spices and condiments, there is reason to believe that the figure of £37,000 shown in the above table does not express the total output of these products in 1907.

*Other products.*—In addition to the output shown in the table on page 132, firms that made their Returns on schedules for the Cattle, Dog and Poultry Foods Trades recorded an output of goods which are mainly produced by other trades, and are dealt with in the Reports on those trades. The following statement shows the value of such goods in the three censal years:—

Kind of goods.	1924.	1912.	1907.
Oil seed cake .. .. .	£'000. 245	£'000. *	£'000. *
(Th. tons) .. .. .	(21·2)	*	*
Other grain products .. .. .	61	18	57
Other goods .. .. .	68	10	3
<b>TOTAL</b> .. .. .	<b>374</b>	<b>28</b>	<b>60</b>

\* Included with cattle feeding stuffs (see table on p. 132).

*Cost of materials.*—The cost of materials used by firms making their Returns on schedules for the Cattle, Dog and Poultry Foods Trades was returned as £4,764,000 in 1924, £1,727,000 in 1912 and £1,128,000 in 1907.

*Net output.*—The net output in 1924 of the firms making their Returns on schedules for the Cattle, Dog and Poultry Foods Trades (whose gross output was valued at £6,869,000) was £2,105,000, that sum representing the total amount by which the value, as delivered, of the aggregate output exceeded the cost, as purchased, of the materials used.

The net output per head of persons employed in the censal year 1924 was £385, as compared with £149 in 1912 and £158 in 1907.

*Exports and imports.*—Exports of sweetened feeding stuffs in 1924 were 16,700 tons and retained imports were 1,200 tons; the quantity available for consumption in that year was, consequently, 294,000 tons, practically all of which was made in the United Kingdom. Exports of unsweetened feeding stuffs for animals (other than cereal milling products, oil-cake and meal, hay, straw, and feeding seeds) were recorded as about 117,500 tons; retained imports were 39,400 tons.



**Wages in 1924.**

Under the Census of Production Act, 1906, the powers of the Board of Trade to require information do not extend to particulars of the amount of wages paid, and, consequently, no information on this head was secured in connexion with the Census of 1924. As a result, however, of the voluntary enquiry undertaken by the Ministry of Labour into wages and hours in the United Kingdom in 1924, information was obtained as to the total wage-bill of a group of firms in the Cattle, Dog and Poultry Foods Trades, which made Returns both to the Ministry of Labour and to the Census of Production office. According to the Census records this group of firms employed, in the week ended 18th October, 1924, 2,200 operatives, or 54 per cent. of the total of 4,058 operatives for the trades as a whole, and their net output totalled £1,038,000, or 49 per cent. of the aggregate net output of £2,105,000 for the trades as a whole. The total wage-bill of these firms, as returned to the Ministry of Labour, was £257,000, representing about 25 per cent. of their aggregate net output.

**Employment.**

The detailed information relating to employment in 1924 is summarised in Table III on page 137. The following table sets out the particulars for that year together with those relating to the two previous censal years. For the purpose of this comparison, the average number of operatives of each sex returned for 1924 have been divided between the two age-groups in the proportion shown by the data relating to the week ended 18th October:—

Average number.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<b>1924.</b>						
Operatives .. .. .	298	3,131	161	813	459	3,944
Administrative, etc. ..	78	1,120	39	401	117	1,521
TOTAL .. .. .	376	4,251	200	1,214	576	5,465
<b>1912.</b>						
Wage earners .. .. .	244	2,327	108	411	352	2,738
Salaried .. .. .	57	1,012	27	139	84	1,151
TOTAL .. .. .	301	3,339	135	550	436	3,889
<b>1907.</b>						
Wage earners .. .. .	160	1,251	22	199	182	1,450
Salaried .. .. .	43	496	2	37	45	533
TOTAL .. .. .	203	1,747	24	236	227	1,983

The numbers of operatives recorded month by month in 1924 ranged from 288 above the average, in November, to 318 below the

average, in July (see Table IIIB, p. 137). They were higher in the winter months than in the summer months and, as shown in the above table, were predominantly male.

**Mechanical Power.**

The detailed information relating to mechanical power in 1924 is summarised in Table IV on page 138. The following table sets out the particulars for the three censal years relating to the capacity and kinds of *prime movers* and the capacity of *electric generators* installed:—

Power equipment.	1924.			1912.	1907.
	Ordinarily in use.	In reserve or idle.	Total.	Total.	Total.
	H.P.	H.P.	H.P.	H.P.	H.P.
<b>PRIME MOVERS:—</b>					
Reciprocating steam engines ..	4,339	654	4,993	4,745	3,655
Steam turbines .. .. .	45	—	45	—	—
Gas engines .. .. .	955	418	1,373	980	—
Petrol and light oil engines ..	137	—	137	100	885
Heavy oil engines .. .. .	15	—	15	—	—
Water power .. .. .	255	—	255	12	56
TOTAL .. .. .	5,746	1,072	6,818	5,837	4,596
<b>ELECTRIC GENERATORS:—</b>					
Driven by—	Kw.	Kw.	Kw.	Kw.	Kw.
Reciprocating steam engines ..	292	113	405	498	75
Gas engines .. .. .	91	—	91	—	—
Petrol and light oil engines ..	—	—	—	51	—
Heavy oil engines .. .. .	—	—	—	—	—
Water power .. .. .	—	—	—	—	—
TOTAL .. .. .	383	113	496	549	75

The capacity of *electric motors* recorded in 1924 and in 1912 was as shown below:—

Electric motors.	1924.			1912.
	Ordinarily in use.	In reserve or idle.	Total.	Total.
	H.P.	H.P.	H.P.	H.P.
Driven by—				
Electricity generated in own works ..	576	53	629	179
Purchased electricity .. .. .	7,536	844	8,380	794

Corresponding information was not required for 1907. The total number of Board of Trade units of electricity purchased for power and lighting purposes in that year was returned as 101,000.



## TABLES.

## I.—Summary of Results.

Particulars.	Unit.	England and Wales and Northern Ireland.*	Scotland.	United Kingdom.
Value of goods made (Gross output) ..	£'000	6,417	452	6,869
Cost of materials used .. .. .	„	4,390	374	4,764
Net output .. .. .	„	2,027	78	2,105
Average number of persons employed ..	No.	5,172	293	5,465
Net output per person employed .. ..	£	392	265	385
Mechanical power available :—				
Prime movers .. .. .	H.P.	5,967	851	6,818
Electric motors driven by purchased electricity .. .. .	„	7,742	638	8,380

\* In order to avoid the possible disclosure of information relating to individual firms, the figures for Northern Ireland have been combined with those for England and Wales.

## II.—Production.

Output sold or added to stock.	Unit.	England and Wales and Northern Ireland.†	Scotland.	United Kingdom.
Oil seed cake .. .. .	<i>Th. tons</i>	*	*	21·2
Other feeding stuffs :—	£'000	*	*	245
Sweetened (containing molasses)	<i>Th. tons</i>	*	*	308·3
Not sweetened .. .. .	£'000	75·2	18·0	93·2
Not sweetened .. .. .	£'000	877	148	1,025
TOTAL—CATTLE FOODS .. .. .	<i>Th. tons</i>	*	*	422·7
Dog foods (including biscuits) .. ..	£'000	*	*	1,010
Poultry foods .. .. .	„	807	71	878
Dog and poultry foods, not separately distinguished .. .. .	„	17	—	17
Animal medicines, spices and condiments .. .. .	„	*	*	679
Other grain products .. .. .	„	60	1	61
Other goods made .. .. .	„	68	—	68
TOTAL VALUE OF GOODS MADE (GROSS OUTPUT) .. .. .	£'000	6,417	452	6,869

† See footnote to Table I.

\* In order to avoid the possible disclosure of information relating to individual firms, figures can only be given for the United Kingdom as a whole.

## III.—Employment.

## A.—NUMBERS EMPLOYED IN WEEK ENDED 18TH OCTOBER, 1924.

Kind of staff.	Males.		Females.		Males and females.	
	Under 18.	All ages.	Under 18.	All ages.	Under 18.	All ages.
<i>England and Wales and Northern Ireland* :—</i>						
Operatives .. .. .	302	3,030	160	793	462	3,823
Administrative, etc.†	73	1,066	36	390	109	1,456
TOTAL .. .. .	375	4,096	196	1,183	571	5,279
<i>Scotland :—</i>						
Operatives .. .. .	8	222	—	13	8	235
Administrative, etc.†	5	54	3	11	8	65
TOTAL .. .. .	13	276	3	24	16	300
<i>United Kingdom :—</i>						
Operatives .. .. .	310	3,252	160	806	470	4,058
Administrative, etc.†	78	1,120	39	401	117	1,521
TOTAL .. .. .	388	4,372	199	1,207	587	5,579

\* See footnote to Table I.

† Administrative, technical and clerical staff.

## B.—OPERATIVES EMPLOYED IN ONE WEEK IN EACH MONTH OF 1924.

*England and Wales and Northern Ireland.\* (Annual average : Males, 2,918 ; Females, 798 ; Total, 3,716.)*

Week ended.	Males.	Females.	Total.	Week ended.	Males.	Females.	Total.
Jan. 12th ..	2,951	757	3,708	July 19th ..	2,680	739	3,419
Feb. 16th ..	3,010	931	3,941	Aug. 16th ..	2,815	753	3,568
March 15th ..	3,012	877	3,889	Sept. 13th ..	2,890	779	3,669
April 12th ..	2,873	800	3,673	Oct. 18th ..	3,030	793	3,823
May 17th ..	2,781	822	3,603	Nov. 15th ..	3,169	790	3,959
June 21st ..	2,705	746	3,451	Dec. 13th ..	3,099	788	3,887

*Scotland. (Annual average : Males, 213 ; Females, 15 ; Total, 228.)*

Jan. 12th ..	203	19	222	July 19th ..	194	13	207
Feb. 16th ..	206	14	220	Aug. 16th ..	202	14	216
March 15th ..	220	16	236	Sept. 13th ..	209	14	223
April 12th ..	211	16	227	Oct. 18th ..	222	13	235
May 17th ..	194	17	211	Nov. 15th ..	258	15	273
June 21st ..	203	15	218	Dec. 13th ..	233	16	249

*United Kingdom. (Annual average : Males, 3,131 ; Females, 813 ; Total, 3,944.)*

Jan. 12th ..	3,154	776	3,930	July 19th ..	2,874	752	3,626
Feb. 16th ..	3,216	945	4,161	Aug. 16th ..	3,017	767	3,784
March 15th ..	3,232	893	4,125	Sept. 13th ..	3,099	793	3,892
April 12th ..	3,084	816	3,900	Oct. 18th ..	3,252	806	4,058
May 17th ..	2,975	839	3,814	Nov. 15th ..	3,427	805	4,232
June 21st ..	2,908	761	3,669	Dec. 13th ..	3,332	804	4,136

\* See footnote to Table I.