

THE BUTTER, CHEESE, CONDENSED MILK AND MARGARINE 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

This report deals with the production of butter, cheese, condensed milk and other milk products and margarine at factories and creameries. Production on farms is not covered, and goods produced by dairies chiefly engaged in the distribution of milk are also excluded (see page 113).

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. Sales of whole milk and fresh pork were included in the output statements of factories and creameries in both years and have been deducted* from the value of the gross output and from the cost of materials used. The total shown for the latter item is, therefore, understated by the amount of the profit on such sales, but the error thus arising is unimportant.

| Particulars | Unit | 1930 | 1924 |
|--|-------|--------|--------|
| Value of goods made and work done (Gross output) | £'000 | 27,568 | 24,441 |
| Cost of materials used | ,, | 21,892 | 20,125 |
| Net output | ,, | 5,676 | 4,316 |
| Average number of persons employed | No. | 11,544 | 11,089 |
| Net output per person employed | £ | 492 | 389 |
| Power available :— | | | |
| Prime movers | H.P. | 21,342 | 21,184 |
| Electric motors driven by purchased electricity | ,, | 9,351 | 4,917 |
| Number of returns | No. | 105 | 103 |
| Number of establishments | ,, | 124 | * |

* 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 896, the corresponding figure for 1924 being 666. In addition, 35 firms to which schedules were sent at the 1930 Census and 57 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 amounts so deducted are, for 1930, £1,521,000 and, for 1924, £687,000.

The value of the gross output of the small firms in 1924 was £1,118,000, and particulars of the items included in this figure are given below:—

| | Th. cwts. | £'000 |
|------------------------------|------------|--------------|
| Butter:— | | |
| Made in the creamery | 10.3 | 97 |
| Purchased and blended | 44.7 | 416 |
| Butter | 55.0 | 513 |
| Cheese:— | | |
| Weight stated | 74.7 | 309 |
| Weight not stated | ... | 10 |
| Condensed milk | 16.8 | 45 |
| Milk powder | 4.6 | 16 |
| | Th. galls. | |
| Cream sold | 246 | 181 |
| Other goods | ... | 44 |
| TOTAL | | 1,118 |

About 49 per cent. of the total output of cheese and about 22 per cent. of that of butter made at factories and creameries in 1924 was recorded by firms that employed not more than ten persons on the average, while about 13 per cent. of the total quantity of cream sold at factories and creameries was returned by these small firms. These firms contributed only about 6 per cent. of the total output of blended butter, and their share in the aggregates recorded for condensed milk and milk powder was still smaller.

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 | 37 | 1,173 | 171 | 630 | 271 |
| 25-49 | 23 | 2,644 | 113 | 793 | 142 |
| 50-99 | 16 | 3,270 | 423 | 1,113 | 380 |
| 100-199 | 11 | 2,652 | 685 | 1,414 | 485 |
| 200-299 | 8 | 3,229 | 976 | 1,822 | 535 |
| 300-399 | 3 | 2,317 | 468 | 929 | 504 |
| 400-499 | 4 | 3,131 | 642 | 1,719 | 373 |
| 750-1,499 | 3 | 9,152 | 2,198 | 3,124 | 703 |
| TOTAL | 105 | 27,568 | 5,676 | 11,544 | 492 |

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:—

* 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 20 | 12,753 | 2,735 | 3,760 | 727 |
| 1924 17 | 10,934 | 1,852 | 4,138 | 448 | |
| 2 ... { | 1930 11 | 5,811 | 981 | 2,631 | 373 |
| 1924 12 | 4,904 | 780 | 2,595 | 301 | |
| 6 ... { | 1930 52 | 6,334 | 1,201 | 3,877 | 310 |
| 1924 51 | 6,210 | 1,232 | 3,169 | 389 | |
| 9 and 10... { | 1930 12 | 1,424 | 442 | 713 | 620 |
| 1924 15 | 1,593 | 283 | 766 | 369 | |
| Other areas ... { | 1930 10 | 1,246 | 317 | 563 | 563 |
| 1924 8 | 800 | 169 | 421 | 401 | |
| TOTAL { | 1930 105 | 27,568 | 5,676 | 11,544 | 492 |
| 1924 103 | 24,441 | 4,316 | 11,089 | 389 | |

Northern Ireland.—The following table summarises the particulars recorded at the Census of Production taken by the Government of Northern Ireland for 1930, together with those furnished at the 1924 Census, in respect of creameries established on a co-operative basis. The particulars relate to creameries that employed an average of more than five persons in each year.

| Particulars | Unit | 1930 | 1924 |
|---|-------|------|------|
| Value of goods made (Gross output) | £'000 | 324 | 503 |
| Cost of materials used | „ | 287 | 453 |
| Net output | „ | 37 | 50 |
| Average number of persons employed | No. | 189 | 249 |
| Net output per person employed | £ | 196 | 201 |
| Power available:— | | | |
| Prime movers | H.P. | 700 | 798 |

The items included in the gross output values shown in the above table were as follows:—

| Goods made for sale | 1930 | | 1924 | |
|----------------------------|-------------------|--------------|------------------|--------------|
| | Quantity | Value | Quantity | Value |
| Butter | Th. cwts. 38 | £'000 271 | Th. cwts. 51 | £'000 491 |
| Cream sold | Th. galls. 105 | 46 | Th. galls. 17 | 12 |
| Whole milk sold | 111 | 5 | — | — |
| Separated milk sold | 214 | 2 | 30 | * |
| TOTAL | ... | 324 | ... | 503 |

* Less than £500.

Production

Principal products.—The following table shows the value and, where available, the quantity of butter, cheese and other milk products and margarine made in 1930 and 1924 for sale. The particulars for 1930 include 500 cwts. of cheese, valued at £5,000 (2 entries) and 1,600 gallons of cream, valued at £1,000 (1 entry) returned on schedules for other trades. No output of the under-mentioned products was recorded on schedules for other trades for 1924.

| Kind of goods | 1930 | | | 1924 | |
|---|------------|--------|---------|----------------|-----------|
| | Quantity | Value | Entries | Quantity | Value |
| Butter :— | Th. cwts. | £'000 | No. | Th. cwts. | £'000 |
| Made in creameries | 46·9 | 377 | 31 | 35·7 | 355 |
| Blended for sale | 958·2 | 7,022 | 38 | 631·3 | 6,137 |
| TOTAL—Butter | 1,005·1 | 7,399 | ... | 667·0 | 6,492 |
| Cheese (except margarine cheese) ... | 386·6 | 2,554 | 48 | { 73·3 * 38 | 413 38 |
| Margarine | 4,033·0 | 10,803 | 15 | 3,663·5† | 10,271 |
| | Th. galls. | | | Th. galls. | |
| Cream | 1,276 | 722 | 44 | 1,603 | 1,233 |
| Separated milk sold | 4,827 | 48 | 37 | 7,884 | 110 |
| | Th. cwts. | | | Th. cwts. | |
| Condensed milk :— | | | | | |
| Sweetened, whole | 446·0 | 1,670 | 11 | 766·2 | 2,887 |
| Sweetened, separated or skimmed | 163·8 | 189 | 10 | | |
| Not sweetened | 264·5 | 656 | 3 | | |
| TOTAL—Condensed milk | 874·3 | 2,515 | ... | 766·2 | 2,887 |
| | Th. cwts. | | | Th. cwts. | |
| Milk powder, sweetened and not sweetened | 134·0 | 787 | 16 | 118·4 | 655 |
| Other milk products (including amount received for blending butter on commission) | ... | 136 | 15 | ... | 506 |
| TOTAL—PRINCIPAL PRODUCTS | ... | 24,964 | ... | ... | 22,605 |

* Weight not stated.

† Including a small quantity of margarine cheese. No production of margarine cheese was recorded separately for 1930.

The figures for cheese shown in the above table for 1930 are not confined to products actually manufactured in this country, but include cheese purchased and blended or otherwise processed. From enquiries made of the firms concerned, it is understood that of the total of 386,600 cwts. shown above at least 176,000 cwts., or over

45 per cent., consisted of purchased cheese, mainly of overseas origin, processed in this country. The proportion of such purchased cheese that is included in the total given for 1924 is not known, but is probably quite small. Allowing for this over-statement in the 1930 total, however, the quantity of cheese manufactured by firms in Great Britain that employed more than ten persons in that year was more than double that recorded by similar firms for 1924, and was substantially greater than the aggregate output in the earlier year at all factories and creameries, including those at which not more than ten persons were employed. Details of particular varieties of cheese produced in 1930 are given in a later table.

Output of milk distributors.—Both for 1930 and 1924 returns were furnished by certain dairies that were engaged chiefly in distributing whole milk but produced small quantities of milk products. Particulars of the output of milk distributors, so far as recorded, are given below. These particulars are not included in the previous table relating to production and (except where otherwise stated) the returns made by these firms are also excluded from the other tables in this report.

| Products | 1930 | | | 1924 | |
|-----------------------------------|------------|-------|---------|------------|-------|
| | Quantity | Value | Entries | Quantity | Value |
| | Th. cwts. | £'000 | No. | Th. cwts. | £'000 |
| Butter :— | | | | | |
| Made in creameries | 2·9 | 24 | 45 | 4·8 | 52 |
| Purchased and blended | 5·8 | 51 | 18 | 5·2 | 48 |
| TOTAL—Butter | 8·7 | 75 | 48 | 10·0 | 100 |
| Cheese | 78·0 | 277 | 48 | 31·9 | 141 |
| | Th. galls. | | | Th. galls. | |
| Cream | 567 | 412 | 66 | 246 | 166 |
| Other milk products | ... | 111 | ... | ... | 37 |

Output of creameries, factories and farms.—The following statement shows, for each of the three divisions of the United Kingdom, so far as possible, the output of butter, cheese and cream at factories and creameries and on farms. The particulars of production on farms relate to the years ended 31st March, 1931 and 1925, respectively, and represent the results of surveys made for those years by the Ministry of Agriculture ("The Agricultural Market Report, 20th January, 1933"), the Board of Agriculture for Scotland (Cmd. 4496) and the Department of Agriculture and Fisheries for Northern Ireland. The figures in respect of factories and creameries relate to all firms in 1924 but for 1930 are limited to firms in Great Britain employing more than ten persons, and in Northern Ireland more than five persons, on the average.

| Kind of products | 1930 | | | | | 1924 |
|-----------------------|-------------------|------------|---------------|------------------|----------------------|----------------------|
| | England and Wales | Scotland | Great Britain | Northern Ireland | Total United Kingdom | Total United Kingdom |
| Butter :— | Th. cwts. | Th. cwts. | Th. cwts. | Th. cwts. | Th. cwts. | Th. cwts. |
| Made on farms* ... | 651 | 52 | 703 | 128 | 831 | 745 |
| Made in creameries | † | † | 47 | 38 | 85 | 102 |
| Total ... | † | † | 750 | 166 | 916 | 847 |
| Cheese :— | | | | | | |
| Made on farms* ... | 547 | 143 | 690 | § | 690 | 648 |
| Made in creameries | 193‡ | 18 | 211 | — | 211 | 153 |
| Total ... | 740 | 161 | 901 | § | 901 | 801 |
| Cream :— | Th. galls. | Th. galls. | Th. galls. | Th. galls. | Th. galls. | Th. galls. |
| Sold off farms ... | 1,339 | 381 | 1,720 | § | 1,720 | 856 |
| Sold at creameries... | 1,141 | 134 | 1,275 | 105 | 1,380 | 1,866 |
| Total ... | 2,480 | 515 | 2,995 | 105 | 3,100 | 2,722 |

* Sold off farms or consumed in farm households.

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

‡ Excluding cheese purchased and processed, so far as recorded.

|| Including an estimate of the weight of cheese returned by value only.

§ Output negligible.

Varieties of cheese.—At the 1930 Census firms were asked to state the different varieties of cheese produced, and the following table summarises the particulars recorded. The varieties of cheese produced in 1924 were not ascertained.

| Kind of cheese | Returned by Creameries | | Returned by Milk Distributors | |
|---|------------------------|-------|-------------------------------|-------|
| | Quantity | Value | Quantity | Value |
| | Th. cwts. | £'000 | Th. cwts. | £'000 |
| Cheddar ... | 103.7 | 481 | 58.4 | 201 |
| Cheshire ... | 36.5 | 125 | 13.5 | 54 |
| Dunlop ... | 6.2 | 20 | | |
| Caerphilly, Colwick (soft), Silverdale (soft), Wensleydale, Derby and Stilton ... | 27.5 | 124 | 1.4 | 6 |
| Other and unclassified (including cream, crustless and processed cheese) ... | 212.7 | 1,804 | 4.7 | 16 |
| TOTAL ... | 386.6 | 2,554 | 78.0 | 277 |

Prices.—The average selling values of the principal products of these trades 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 variety of the products included under the specified descriptions.

| Kind of goods | Average value | | 1930 as a percentage of 1924 |
|-------------------------------------|----------------------|----------------------|------------------------------|
| | 1930 | 1924 | |
| Butter :— | £ per cwt. | £ per cwt. | Per cent. |
| Made in creameries ... | 8.05 | 9.94 | 80.9 |
| Purchased and blended ... | 7.33 | 9.72 | 75.4 |
| Cheese ... | 6.59 | 5.66 | 116.4 |
| Margarine ... | 2.68 | 2.84 | 94.4 |
| Cream ... | s. per gall. 11.3 | s. per gall. 15.4 | 73.4 |
| Separated milk ... | d. per gall. 2.37 | d. per gall. 3.34 | 71.0 |
| Condensed milk :— | £ per cwt. | £ per cwt. | |
| Sweetened, whole ... | 3.75 | 4.12 | 91.0 |
| Sweetened, separated or skimmed ... | 1.16 | 2.12 | 54.7 |
| Not sweetened ... | 2.48 | 3.67 | 67.6 |
| Milk powder ... | 5.87 | 5.53 | 106.1 |

Volume of production in 1930 and 1924.—The following table compares the volume of production in 1930 and 1924 at factories and creameries employing more than ten persons on the average :—

| Kind of goods | Total production | | | 1930 as a percentage of 1924 |
|--|------------------|-------------|------------------------|------------------------------|
| | 1930 | 1924 | | |
| | As returned | As returned | At 1930 average values | |
| Butter :— | £'000 | £'000 | £'000 | Per cent. |
| Made in creameries ... | 377 | 355 | 287 | 131 |
| Purchased and blended ... | 7,022 | 6,137 | 4,627 | 152 |
| Cheese ... | 2,554 | 451 | 525 | 486 |
| Margarine ... | 10,803 | 10,271 | 9,996 | 108 |
| Cream ... | 722 | 1,233 | 905 | 80 |
| Separated milk ... | 48 | 110 | 78 | 61 |
| Condensed milk ... | 2,515 | 2,887 | 2,425 | 104 |
| Milk powder ... | 787 | 655 | 697 | 113 |
| Other milk products (including butter blended on commission) | 136 | 506 | 447* | 31 |
| TOTAL ... | 24,964 | 22,605 | 19,987 | 125 |

* Based on average value of preceding items in the table.

Production, exports and imports.—The following table shows, in relation to production, the quantities of the principal classes of butter, cheese, etc., 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 pages 109-10 of this report should be borne in mind; the figures for both 1930 and 1924 include the recorded output of firms in Northern Ireland and those for 1924 include, in addition, the output of the small firms. The production figures include the output returned by milk distributors, and for butter, cheese and cream, the production at farms; butter purchased and blended and processed cheese are excluded.

| Kind of goods | Production | | Proportion of production exported | Retained imports | Available for use in the United Kingdom | | Share of home market held by British products |
|-----------------|------------|---------|-----------------------------------|------------------|---|-----------|---|
| | Exports | Exports | | | Th. cwts. | Th. cwts. | |
| Butter ... | 1930 | 916 | 10 | 1.1 | 6,648 | 7,554 | 12.0 |
| | 1924 | 853 | 20 | 2.3 | 5,096 | 5,929 | 14.0 |
| Cheese ... | 1930 | 979 | 50 | 5.1 | 3,082 | 4,011 | 23.2 |
| | 1924 | 862 | 8 | 0.9 | 2,840 | 3,694 | 23.1 |
| Margarine ... | 1930 | 4,033 | 93 | 2.3 | 843 | 4,783 | 82.4 |
| | 1924 | 3,670* | 43 | 1.2 | 1,312 | 4,939 | 73.4 |
| Condensed milk | 1930 | 874 | 198 | 22.7 | 2,596 | 3,272 | 20.7 |
| | 1924 | 783 | 98 | 12.6 | 2,182 | 2,867 | 23.9 |
| Milk powder ... | 1930 | 134 | 14† | 10.3 | 247† | 367 | 32.7 |
| | 1924 | 123 | 6† | 4.9 | 84† | ... | ... |

* Including a small quantity of margarine cheese.

† The 1924 figures exclude preparations consisting mainly of dried milk; the 1930 figures include particulars of such preparations when they contained 70 per cent. or more of dried milk.

The quantity of margarine available for consumption in 1930 was 3 per cent. less than in 1924, but for butter there was an increase of between 27 and 28 per cent., and for cheese an increase of about 11 per cent., making an allowance for the output of the small firms in 1930. Per head of the population of the United Kingdom there was available in 1930 about 18.4 lbs. of butter and 11.7 lbs. of margarine, and in 1924, 14.8 lbs. of butter and 12.3 lbs. of margarine.

Work done on commission.—The amount recorded as received for blending butter on commission in 1930 and 1924 is included under the heading "Other milk products" in the table on page 112. Owing to the possible disclosure of information relating to individual firms this amount cannot be shown separately.

Other products.—In addition to the output shown in the table of principal products on page 112, the following goods were produced in 1930 and 1924 by firms that made their returns on schedules for the Butter, Cheese, Condensed Milk and Margarine 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 |
| Lard and lard compound | 2,113 | 1,226 |
| Oils, fats and greases (including suet and dripping) ... | 381 | 491 |
| Soups, potted and cooked meats, bacon, etc. | 72 | 72 |
| Other goods | 44 | 47 |
| TOTAL | 2,610 | 1,836 |

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) | 412 | 5,983 | 1,035 | 3,511 | 1,447 | 9,494 |
| Administrative, technical and clerical staff (as at 18th October) | 98 | 1,369 | 99 | 681 | 197 | 2,050 |
| TOTAL | 510 | 7,352 | 1,134 | 4,192 | 1,644 | 11,544 |
| 1924 | | | | | | |
| Operatives (average for the year) | 453 | 5,656 | 655 | 2,811 | 1,108 | 8,467 |
| Administrative, technical and clerical staff (as at 18th October) | 97 | 1,819 | 72 | 803 | 169 | 2,622 |
| TOTAL | 550 | 7,475 | 727 | 3,614 | 1,277 | 11,089 |

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 | 10,516 | 1,806 | 12,322 | 10,146 | 3,250 | 13,396 |
| Steam turbines | 3,030 | 2,680 | 5,710 | 2,680 | 2,680 | 5,360 |
| Internal combustion engines :— | | | | | | |
| Gas | 1,010 | 297 | 1,307 | 1,089 | 56 | 1,145 |
| Petrol, kerosene, or other light oils | 312 | 91 | 403 | 814 | 187 | 1,001 |
| Heavy oils | 1,188 | 297 | 1,485 | 152 | — | 152 |
| Water engines | 115 | — | 115 | 130 | — | 130 |
| TOTAL | 16,171 | 5,171 | 21,342 | 15,011 | 6,173 | 21,184 |
| ELECTRIC GENERATORS | | | | | | |
| Driven by | Kw. | Kw. | Kw. | Kw. | Kw. | Kw. |
| Reciprocating steam engines | 3,871 | 880 | 4,751 | 3,958 | 1,988 | 5,946 |
| Steam turbines | 2,260 | 2,000 | 4,260 | 2,000 | 2,000 | 4,000 |
| Internal combustion engines :— | | | | | | |
| Gas | 309 | 80 | 389 | 110 | 65 | 175 |
| Petrol, kerosene, or other light oils | 99 | 4 | 103 | 20 | — | 20 |
| Heavy oils | 390 | 142 | 532 | 1 | — | 1 |
| Water engines | 122 | 16 | 138 | 36 | 20 | 56 |
| TOTAL | 7,051 | 3,122 | 10,173 | 6,125 | 4,073 | 10,198 |
| ELECTRIC MOTORS | | | | | | |
| Driven by | H.P. | H.P. | H.P. | H.P. | H.P. | H.P. |
| Electricity generated in same works | 11,097 | 1,856 | 12,953 | 11,505 | 1,763 | 13,268 |
| Purchased electricity | 7,937 | 1,414 | 9,351 | 4,502 | 415 | 4,917 |
| TOTAL | 19,034 | 3,270 | 22,304 | 16,007 | 2,178 | 18,185 |

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 | 75,777 | 82,880* | 890 |
| Coke | 282 | 2,346* | — |
| Electricity used for all purposes :— | | | B.T.U. (Kw.-hrs.) '000 |
| Generated in same works | ... | ... | 17,690 |
| Purchased | ... | ... | 9,443 |
| TOTAL—Electricity | ... | ... | 27,133 |

* These figures were recorded by firms representing 92·7 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 goods made and work done (Gross output) | £'000 | 26,144 | 1,424 | 27,568 |
| Cost of materials used | " | 20,910 | 982 | 21,892 |
| Net output | " | 5,234 | 442 | 5,676 |
| Average number of persons employed... | No. | 10,831 | 713 | 11,544 |
| Net output per person employed ... | £ | 483 | 620 | 492 |
| Power available :— | | | | |
| Prime movers | H.P. | 19,554 | 1,788 | 21,342 |
| Electric motors driven by purchased electricity | " | 8,650 | 701 | 9,351 |

II. Production

| Kind of goods made and work done | Unit | England and Wales | Scotland | Great Britain |
|---|-------------------|-------------------|----------|---------------|
| Butter made in the creamery | <i>Th. cwt.</i> | * | * | 46.9 |
| | £'000 | * | * | 377 |
| Butter blended for sale | <i>Th. cwt.</i> | * | * | 958.2 |
| | £'000 | * | * | 7,022 |
| TOTAL—Butter | <i>Th. cwt.</i> | 999.2 | 5.9 | 1,005.1 |
| | £'000 | 7,346 | 53 | 7,399 |
| Cheese (except margarine cheese) | <i>Th. cwt.</i> | 368.2 | 17.9 | 386.1 |
| | £'000 | 2,495 | 54 | 2,549 |
| Margarine | <i>Th. cwt.</i> | 3,668 | 365 | 4,033 |
| | £'000 | 9,694 | 1,109 | 10,803 |
| Cream | <i>Th. galls.</i> | 1,141 | 134 | 1,275 |
| | £'000 | 642 | 79 | 721 |
| Separated milk | <i>Th. galls.</i> | 4,217 | 610 | 4,827 |
| | £'000 | 39 | 9 | 48 |
| Condensed milk :— | | | | |
| Sweetened, whole | <i>Th. cwt.</i> | 446.0 | — | 446.0 |
| | £'000 | 1,670 | — | 1,670 |
| Sweetened, separated or skimmed... | <i>Th. cwt.</i> | 163.8 | — | 163.8 |
| | £'000 | 189 | — | 189 |
| Not sweetened | <i>Th. cwt.</i> | 264.5 | — | 264.5 |
| | £'000 | 656 | — | 656 |
| TOTAL—Condensed milk | <i>Th. cwt.</i> | 874.3 | — | 874.3 |
| | £'000 | 2,515 | — | 2,515 |

| Kind of goods made and work done | Unit | England and Wales | Scotland | Great Britain |
|--|-----------------|-------------------|----------|---------------|
| Milk powder, sweetened and not sweetened | <i>Th. cwt.</i> | * | * | 134.0 |
| | £'000 | * | * | 787 |
| Other milk products (including amount received for blending butter on commission) | £'000 | 134 | 2 | 136 |
| Lard and lard compound | £'000 | * | * | 2,113 |
| Oils, fats and greases (including suet and dripping) | £'000 | * | * | 381 |
| Soups, potted and cooked meats, bacon, etc. | £'000 | 72 | — | 72 |
| Other goods | £'000 | 44 | — | 44 |
| TOTAL VALUE OF GOODS MADE AND WORK DONE (GROSS OUTPUT) ... | £'000 | 26,144 | 1,424 | 27,568 |

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

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 | 404 | 5,742 | 1,005 | 3,416 | 1,409 | 9,158 |
| Administrative, etc.* ... | 94 | 1,252 | 94 | 632 | 188 | 1,884 |
| TOTAL | 498 | 6,994 | 1,099 | 4,048 | 1,597 | 11,042 |
| <i>Scotland :—</i> | | | | | | |
| Operatives | 16 | 321 | 49 | 140 | 65 | 461 |
| Administrative, etc.* ... | 4 | 117 | 5 | 49 | 9 | 166 |
| TOTAL | 20 | 438 | 54 | 189 | 74 | 627 |
| <i>Great Britain :—</i> | | | | | | |
| Operatives | 420 | 6,063 | 1,054 | 3,556 | 1,474 | 9,619 |
| Administrative, etc.* ... | 98 | 1,369 | 99 | 681 | 197 | 2,050 |
| TOTAL | 518 | 7,432 | 1,153 | 4,237 | 1,671 | 11,669 |

* 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 ... | 8,670 | 577 | 9,247 | July 19... | 9,221 | 581 | 9,802 |
| Feb. 15 ... | 8,731 | 565 | 9,296 | Aug. 16... | 9,253 | 594 | 9,847 |
| Mar. 15 ... | 8,827 | 610 | 9,437 | Sept. 13... | 9,208 | 467 | 9,675 |
| April 12 ... | 9,013 | 594 | 9,607 | Oct. 18 ... | 9,158 | 461 | 9,619 |
| May 17 ... | 9,010 | 587 | 9,597 | Nov. 15... | 8,645 | 473 | 9,118 |
| June 21 ... | 9,095 | 587 | 9,682 | Dec. 13 ... | 8,527 | 473 | 9,000 |
| AVERAGE FOR THE TWELVE MONTHS | | | | | 8,947 | 547 | 9,494 |

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 | 9,067 | 1,761 | 1,449 | 45 | 10,516 | 1,806 |
| Internal combustion engines :— | | | | | | |
| Gas | 890 | 297 | 120 | — | 1,010 | 297 |
| Petrol, kerosene, or other light oils ... | 228 | 68 | 84 | 23 | 312 | 91 |
| Heavy oils | 1,154 | 269 | 34 | 28 | 1,188 | 297 |
| Water engines | 110 | — | 5 | — | 115 | — |
| TOTAL | 14,479 | 5,075 | 1,692 | 96 | 16,171 | 5,171 |
| TOTAL OF PRIME MOVERS INSTALLED | 19,554 | | 1,788 | | 21,342 | |
| ELECTRIC GENERATORS | | | | | | |
| Driven by | Kw. | Kw. | Kw. | Kw. | Kw. | Kw. |
| Reciprocating steam engines | 3,204 | 600 | 667 | 280 | 3,871 | 880 |
| Steam turbines | 2,260 | 2,000 | — | — | 2,260 | 2,000 |
| Internal combustion engines :— | | | | | | |
| Gas | 299 | 80 | 10 | — | 309 | 80 |
| Petrol, kerosene, or other light oils | 99 | 4 | — | — | 99 | 4 |
| Heavy oils | 390 | 142 | — | — | 390 | 142 |
| Water engines | 122 | 16 | — | — | 122 | 16 |
| TOTAL | 6,374 | 2,842 | 677 | 280 | 7,051 | 3,122 |
| TOTAL OF ELECTRIC GENERATORS INSTALLED | 9,216 | | 957 | | 10,173 | |
| ELECTRIC MOTORS | | | | | | |
| Driven by | H.P. | H.P. | H.P. | H.P. | H.P. | H.P. |
| Electricity generated in same works ... | 10,053 | 1,516 | 1,044 | 340 | 11,097 | 1,856 |
| Purchased electricity | 7,261 | 1,389 | 676 | 25 | 7,937 | 1,414 |
| TOTAL | 17,314 | 2,905 | 1,720 | 365 | 19,034 | 3,270 |
| TOTAL OF ELECTRIC MOTORS INSTALLED | 20,219 | | 2,085 | | 22,304 | |

V. Consumption of fuel

| Kind of fuel used | England and Wales | Scotland | Great Britain |
|--------------------------------------|------------------------------|------------------------------|------------------------------|
| | Coal used for power* | Tons 69,503 | Tons 6,274 |
| Coke used for power | 282 | — | 282 |
| Electricity used for all purposes :— | B.T.U. (Kw.-hrs.) '000 | B.T.U. (Kw.-hrs.) '000 | B.T.U. (Kw.-hrs.) '000 |
| Generated in same works | 16,862 | 828 | 17,690 |
| Purchased | 8,994 | 449 | 9,443 |
| TOTAL—Electricity | 25,856 | 1,277 | 27,133 |

* In addition, 890 tons of coal (650 tons in England and Wales and 240 tons in Scotland) were recorded as used for power and for other purposes, not separately distinguished.