## 7 Grain milling

This Report on the Grain Milling Industry relates to establishments engaged wholly or mainly in milling wheat (including the production of self-raising and patent flour at milling establishments); milling, flaking or rolling barley, oats, maize, rye, rice, etc, the production of wheat and other grain offal, splitting or grinding peas, beans, lentils, soya beans, sago, tapioca, or manufacturing ready-to-eat breakfast cereals such as cornflakes, puffed or shredded wheat.

This industry corresponds to minimum list heading 211 in the Standard Industrial Classification (Revised 1968), which has been used for the first time as a basis of classification in the 1968 Census.

The industry corresponds to the Grain Milling Industry (Part 7) in the Reports on the last detailed Census of Production for 1963, except that the non-standard procedure affecting the classification of returns with production of animal and poultry feeding-stuffs at milling establishments has been discontinued.

Throughout this Report, the figures given for 1963 have been reclassified as far as possible according to the Standard Industrial Classification (Revised 1968) so that data for 1963 and 1968 are on the same industrial basis.

## METHOD OF CLASSIFICATION

The following adaptation to the standard classification procedure was made to bring within scope of this industry establishments with sales of self-raising flour (made from flour of the establishments own milling), which otherwise would have been classified to the Starch and Miscellaneous Foods Industry (Part 18). Sales of self-raising flour were treated equally as principal products of the Grain Milling Industry and the Starch and Miscellaneous Foods Industry, unless they amounted to 85 per cent. or more of the total output, in which case, the return was classified to the Starch and Miscellaneous Foods Industry. Details of the sales of self-raising flour are shown in the report on the Starch and Miscellaneous Foods Industry.

The classification of returns to the sub-divisions of this industry followed the standard procedure.

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which appear on pages (i) to (iv).

TABLE 1 Industry summary, 1963 and 1968 United Kingdom (a) (b)

|  | Unit | All establi shments |  |
| :---: | :---: | :---: | :---: |
|  |  | 1963 | 1968 |
| Number of enterprises | No. | 405 | 248 |
| Nunber of establ i shments | " | 529 | 352 |
| Gross output | £ 000 | 310,521 | 363, 267 |
| Net output | " | 75,572 | 95,454 |
| Net output per head | £ | 2,567 | 4,037 |
| ( $\quad$ goods produced and work done (c) | £.000 | 282,726 | 322,207 |
| Sales and work done $\quad$ gmerchented goods and canteen takings | " | 27,761 | 40, 171 |
| $\int \begin{aligned} & \text { materials for use in production and } \\ & \text { packaging and fuel } \end{aligned}$ | " | 205,334 | 226,682 |
| Purchases $\quad\left\{\begin{array}{l}\text { goods for merchanting and canteen } \\ \text { purchases }\end{array}\right.$ | " | 24,624 | 33,285 |
| for work done on materials given out | " | 63 | 17 |
| Payments to other organisations $\quad\left\{\begin{array}{c}\text { for transport } \\ \text { by road }\end{array}\right.$ | " |  | 7,230 |
| by rail and other means excluding postal services | * | 7,1 | 1,460 |
| Stocks and work in progress $\quad$ change during yea | * | + 2,286 | + 1,750 |
| Total stocks and work in progress | " | 2,286 35,260 | 35,574 |
| change during year | " | + | + 850 |
| Goods on hand for sale $\quad\left\{\begin{array}{l}\text { at end of year }\end{array}\right.$ | " | 8,360 | 9,447 |
| change during year | " | + 25 | + 40 |
| Hork in progress $\quad\left\{\begin{array}{l}\text { at end of year }\end{array}\right.$ | " | 425 | 288 |
| \{change during year | " | + 2,252 | + 860 |
| Materials, stores and fuel $\left\{\begin{array}{l}\text { at end of year }\end{array}\right.$ | " | 26,475 | 25,839 |
| $\int$ total, including working proprietors | Th. | 29.4 | 23.6 |
| Number employed on average during the year | " | 20.7 | 16.9 |
| during the year other employees (d) |  | 8.3 | 6.4 |
| of operatives | £'000 | 15,592 | 17,692 |
| Hages and salaries $\quad\left\{\begin{array}{l}\text { of other employees (d) }\end{array}\right.$ | . | 8,006 | 8,424 |
| Capital expenditure (e) |  |  |  |
| Total | " | 8,373 | 8,258 |
| New building work | " | 2,541 | 1,573 |
| Land and existing buildinge (f) | " | - 214 | 125 |
| Plant and machinery ( f ) |  | 5,306 | 5,290 |
| Vehicles (f) | " | 740 | 1,270 |

(a) For 1968, estimates for establishments not making satisfactory returns and for small establishments,
from which only employment data were collected, accounted for 9 per cent. of the total figures in which they were incorporated: of this, unsatisfactory returns accounted for 2 per
comparable figures were 10 per cent. and less than 1 per cent. respectively.
(b) The following information relates to small establishments (employing fewer than 25 persons) in this industry.
(b) The following information relates to small establishments (employing fewer than 25 .

|  | 1963 | 1968 |
| :--- | ---: | ---: |
| Number of establishments  <br> Average number employed: 363 <br> Working proprietors  <br> Other persons employed 406 <br>  2,733 | 208 |  |

Footnotes continued on page $7 / 2$.

TABLE 2 Analysis by size of establishment within the industry, 1968
(i) Output and employment

All establishments: United Kingdom

| Number employed on average during the year by the establ i shment (a) | $\begin{aligned} & \text { Est ab- } \\ & \text { Ei sh- } \\ & \text { 1imnts } \end{aligned}$ | $\begin{aligned} & \text { Enter- } \\ & \text { prises } \\ & \text { (b) } \end{aligned}$ | Total number employed on average year (a) | Gross output | $\begin{gathered} \mathrm{Net} \\ \text { output } \end{gathered}$ | Net output per head |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Number | Number | £'000 | £'000 | £ |
| 1-5 | 76 | 73 | 219 |  | .. | .. |
| 6-10 | 34 | 34 | 252 |  | .. |  |
| 11-24 | 68 | 62 | 1,168 | .. | . | .. |
| 25-49 | 38 | 27 | 1,443 | 25,238 | 4,842 | 3,355 |
| 50-99 | 49 | 25 | 3,614 | 68,396 | 14,430 | 3,993 |
| 100-199 | 24 | 14 | 3,352 | 49,890 | 10,731 | 3, 201 |
| 200-299 | 18 | 6 | 4,499 | 80,322 | 18,499 | 4,112 |
| 300-999 | 9 | 3 | 4,349 | 65,791 | 18,549 | 4, 265 |
| 1,000 and over | 3 | 3 | 4,244 | 40,621 | 19,895 | 4,688 |
| Unsatisfactory returns | 33 | 31 | 505 | .. | .. | .. |
| Total | 352 | 248 | 23,645 | 363,267(c) | 95, 454(c) | 4,037(c) |

(ii) Employees, wages and sal aries

All establi shments: United Kingdom

| Number employed on average during the year by the est abl i shment (a) | Employees |  | Wages and sal aries |  | Wages and sal aries per head |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Operatives | Others (d) | Operatives | 0 thers (d) | Operatives | 0 thers <br> (d) |
|  | Number | Number | £'000 | $£^{\prime} 000$ | £ | £ |
| 1-5 | .. | . | .. |  | . | . |
| 6-10 | .. | . | .. | . | . | - .. |
| 11-24 | . | . | .. | . | . | . |
| 25-49 | 1,044 | 383 | 1,083 | 544 | 1,037 | 1,420 |
| 50-99 | 2,677 | 922 | 2,804 | 1,176 | 1,047 | 1,275 |
| 100-199 | 2,525 | 823 | 2,473 | 954 | 979 | 1,160 |
| 200-299 | 3, 253 | 1,247 | 3,403 | 1,535 | 1,046 | 1,231 |
| 300-999 | 2,825 | 1,522 | 2,976 | 2,014 | 1,053 | 1,323 |
| 1,000 and over | 3,242 | 995 | 3,509 | 1,484 | 1,082 | 1,491 |
| Unsatisfactory returns | . |  |  |  |  |  |
| Total | 16,947(c) | 6,449(c) | 17,692(c) | 8,424(c) | 1,044(c) | 1,306(c) |

(a) Including working proprietors.
(b) The sum of the figures for the size groups exceeds the total for the industry to
the extent that enterprises made returns for establishments in more than one the extent
size group.
(c) Including estimates for establishments employing fewer than 25 persons and for
(d) Administrative, technical and clerical employees

TABLE 3 Percentage analysis of employees, by age and sex, 1969 (a)
All establishments: United Kingdom

| All establishments: United Kingdom |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Ages | Mal es | Fenales | All enployees |  |
| Under 18 | Per cent. | Per cent. | Per cent. |  |
|  | 1 | 1 | 2 |  |
|  | 78 | 20 | 98 |  |
|  | 79 | 21 | 100 |  |
|  |  |  |  |  |

(a) The percentages relate to the numbers employed (excluding working proprietors) at June 1969, the earliest date fo Standard Industrial Cl assification, (Revised 1968).

Footnotes to Table 4.
(a) Some establishments employing fewer than 25 persons were included in returns for larger establishments. Thes
amounted to 8 establishments in 1938 and 18 in 1963 . (b) The method of classifying returns to sub-divisions of th
industry is explained in the notes the characteristic
products of each sub-division are identified in Table 5 .
(c) The sum of the figures for the sub-divisions exceeds the total for the industry to the extent th
returns for more than one sub-division
(d) Including services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing
services rendered).
(e) Direct sales of goods (excluding canteen takings) made to,

(f) Characteristic products relate only to sub-divisions of
(g) For sub-divisions of the industry, this is the ratio of
sales of characteristic products to total sales of sales of characteristic products to total sales of goods
produced and work done. For the industry as a whole, thi is the ratio of total sales of principal products by the
industry to total sales of goods produced and work done.
industry to total sales of goods produced and work
(h) Administrative, technical and clerical employees.
(i) Excluding expenditure for establishments not yet i
(i) Excluding ex
(j) Acquisitions less disposals

## TABLE 4 Analysis of larger establishments, 1963 and 1968

 Establishments employing 25 or more persons: Analysis of returns received, United Kingdom (a)


For notes to this table - see page $7 / 5$

TABLE 5 Sales of principal products of the industry by larger establishments, including sales by establishments classified to other industries, 1963 and 1968
Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom


a) The number given is that of the sub-division of which the item is a characteristic product. The
sales shown are total sales by larger establishments, not merely sales by establishments ciassified sal es shown are
to the sub-division.
(b) This figure represents the total number of returns made for larger establishments in this industry which is lesser than the total number o
covering more than one establishment.

TABLE 6 Sales of principal products of the industry by larger establishments classified to other industries, 1963 and 1968
Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

|  | 1963 |  | 1968 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Quantity | Value | Quantity | Value | Entries | Principal industries in which produced (a) |
| Wheat products | Th. tons | £'000 | Th.tons | £’000 | Number |  |
| Meal and flour (excluding selfraising flour) and semolina <br> White flour for breadmaking <br> Other white flour <br> High extraction flours (including wheatmeal) and semolina <br> Bran, pollard, sharps and middlings (including weatings and superfine weat ings) and other wheat products and by-products (other than cereal breakfast foods in packets for retail sale) |  |  |  |  |  |  |
|  |  |  | 84.5 | 4,142 | 9 | 8,15 |
|  | 201 | 7,917 $\}$ | 23.6 | 852 | 8 | 8,15 |
|  |  | 67 |  | 152 | 6 | 15 |
|  | 56.5 | 1,255 | 26.5 | 646 | 34 | 15 |
| Total wheat products (other than cereal breakfast foods in packets for retail sale) | 257 | $\begin{array}{r}9,171 \\ \hline\end{array}$ | 135 | 5,640 152 | \} .. |  |
| Oat products (other than cereal breakfast foods in packets for retail sale) | 18.0 | 566 | 8.8 | 238 99 | \} .. | 15 |
| Barley products Meal |  |  |  |  |  |  |
|  | 71.2 | 1,784 | 43.4 | 1,191 | 103 | 15 |
| 0 ther barley products and by-products <br> Total barley products (other than cereal breakfast foods in packets for retail sale) | 22.9 | 618 | .. | 2,340 | 62 | 15 |
|  | 94.1 | 2, $402\{$ | 43.4 | 1,191 2,340 | \} .. |  |
| Maize products |  |  |  |  |  |  |
| Meal and flour and other maize products and by-products (other than cereal breakfast foods in packets for retail sale) | 91.6 | 2,511 | 72.0 | 2,198 | 68 | 15,18 |
| Flaked maize <br> For human consumption <br> Not for human consumption |  |  |  |  |  |  |
|  | $\} 103$ | 2,961 $\{$ | $\cdots$ | 496 | * |  |
|  | \} 103 | 2,961 | 112 |  | 30 |  |
| Total maize products (other than cereal breakfast foods in packets for retail sale) | 195 | 5,472 $\{$ | 183 | 5,553 496 | .. |  |
| Cereal breakfast foods in packets for retail sale | 3.5 | 599 |  |  |  |  |
| Rice whole (husked or cleaned) and rice products (other than rice puddings canned and cereal breakfast foods in packets for retail sale) | 2.3 | 185 | \} 13.5 | 2,422 | .. | 9,11,15,18 |
| Soya meal flour and by-products, rye meal, flour and by-products, pea and bean meal and flour and other meal, flour and by-products (excluding compound meals), split lentils and split peas; milling done by grist millers and others on commission | .. | 911 |  | - | - |  |
| Total |  | 19,373 |  | 18,131 |  |  |

(a) The references given are to the list of industries at the front of this report.

TABLE 7 Sales of other than principal products by larger establishments in the industry, 1963 and 1968

Establ ishments employing 25 or more persons:
Analysis of returns received, United Kingdom

|  | 1963 |  | 1968 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Quantity | Value | Quantity | Value |
|  | Th. tons | £'000 | Th.tons | £'000 |
| Compound feeding stuffs (except dog and cat foods) for animals, poultry, etc, (including molassed feeds containing not less than 30 per cent. molasses) | 975 | 30,892 | 867 | 30,885 |
| Other animal and poultry feeding stuffs, including dog and cat foods | 159 | 6,625 |  | 10,703 |
| Self-raising flour | $\begin{gathered} \text { Th. cwt. } \\ 3,067 \end{gathered}$ | 7,629 | $\begin{gathered} \text { Th.cwt. } \\ 3,698 \end{gathered}$ | 10,724 |
| Other products | .. | 4,927 | .. | 4,487 |
| Services rendered to other organisations (a) |  | 555 |  | 674 |
| Total value of goods sold without having been subjected to any manufacturing process (merchanted or factored) |  | 24,765 |  | 36,516 |
| Canteen takings |  | 142 |  | 172 |
| Total |  | 75,534 |  | 94,160 |

(a) Amounts charged for hiring out plant, machinery or other goods, for providing transport,

TABLE 8 Production of certain principal products of the industry by larger establishments, 1963 and 1968

This table is not applicable to this industry.

TABLE 9 Purchases by larger establishments of selected principal products of the industry, 1968

This table is not applicable to this industry

TABLE 10 Purchases by larger establishments in the industry, 1963 and 1968 Establishments employing 25 or more persons: Analysis of returns received, United Kingdom

|  | 1963 |  | 1968 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Quantity | Cost | Quantity | Cost |
| Materials for use in production |  | £'000 |  | £'000 |
| Wheat |  |  |  |  |
| Home grown | . | 31,171 | . | 40,195 |
| Imported | .. | 89,571 | .. | 99,073 |
| 0 at |  |  |  |  |
| Home grown | . | 2,085 | . | 1,936 |
| Imported | .. | 607 | .. | 5 |
| Barley |  |  |  |  |
| Home grown | . | 5,212 | .. | 5,868 |
| Imported | . | 634 | . | 190 |
| Maize | .. | 14,608 | .. | 12,083 |
| Rice | . | 4,321 | .. | 6,172 |
| Soya beans | . | 602 | . | 1,068 |
| Peas, beans (excluding soya beans) and lentils | .. | 1,227 | .. | 1,198 |
| Wheat flour purchased for blending with millers' own products |  |  |  |  |
| Home produced | . | 1,591 | $\begin{gathered} \text { Th.tons } \\ 63.1 \end{gathered}$ | 2,331 |
| Imported | . | 452 | 3.2 | 149 |
| Wheat offals purchased for further manufacturing or for mixing with millers' own products |  |  |  |  |
| Home produced | . | 496 | . | 1,458 |
| Imported | .. | 217 | .. | 212 |
| Oil seed cake and meal |  |  |  |  |
| Home produced | .. | 502 | .. | 891 |
| Imported | . | 3,824 | .. | 2,726 |
| Groats and oatmeal (including pinhead oatmeal) used for further processing or manufacture | .. | 191 | .. | 113 |
| Molasses | . | 509 | .. | 392 |
| Milk products (including whey and buttermilk powder) | . | 111 | . $\cdot$ | 207 |
| Raw meat purchased for incorporation in canned pet foods | .. | (a) | Th.cwt. 48.1 | 303 |
| Meat meal, meat and bone meal, bone meal and sterilised bone flour | . | 663 |  | 1,122 |
| Fish meal and fish waste | .. | 1,621 | .. | 2, 200 |

TABLE 10 (cont inued)


|  | 1963 |  | 1968 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Quantity | Cost | Quantity | Cost |
| Fuel and electricity (c) (continued) | Th.gal. | £'000 | Th.gal. | £'000 |
| Derv fuel and motor spirit for use in road vehicles | 2,595 | 507 | 2,695 | 683 |
| 0 ther liquid fuels (including creosote/pitch mixtures, etc and liquefied petroleum gases) | 6,333 | 261 | 8,258 | 388 |
| Gas | Th. therms <br> 2,995 | $199\{$ | Th. therms <br> 280 | 24 214 |
|  | Th. kWh |  | Th. kWh |  |
| Electricity | 449,660 | 2,550 | 484,169 | 3,237 |
| All other fuels |  | (a) |  | 58 |
| Total cost of materials and fuel |  | 184,224 |  | 207,029 |
| Goods purchased for merchanting |  | 21,895 |  | 30,164 |
| Canteen purchases |  | 197 |  | 235 |
| Total cost of purchases |  | 206,316 |  | 237,428 |

(a) Not recorded separately for 1963
(b) Bags were not included for 1963.
(c) The total quantity of electricity generated in establishments employing 25 or more persons in this industry was 2,585 Th. kWh in 1963 . 0 wing to the
individual firms details cannot be given for 1968 .

TABLE 11 Transport costs and employment of larger establishments, 1963 and 1968
Establishments employing 25 or more persons:
Analysis of returns received, United Kingdom

|  | Unit | 1963 | 1968 |
| :---: | :---: | :---: | :---: |
| Average number mainly employed on transport | No. | 1,735 | 1,727 |
| Transport costs |  |  |  |
| Wages and salaries | £'000 | 1,530 | 2,021 |
| Derv fuel and motor spirit |  | 507 | 683 |
| Tyres and other spare parts for road goods vehicles | " |  | 286 |
| [ by road | " |  | 6,603 |
| Payments to other organisations for transport $\quad\left\{\begin{array}{l}\text { by rail and other } \\ \text { means excluding } \\ \text { postal services }\end{array}\right.$ |  | -6,442 | 1,333 |
| Costs of operating road goods vehicles |  |  |  |
| Insurance | " | 75 | 75 |
| Vehicle licences |  | 100 | 194 |
| Depreciation |  | 445 | 485 |
| Payments to other organisations for repairs and maintenance |  | 314 | 365 |
| Total |  | 9,412(a) | 12,045 |

[^0]not collected separately for 1963.
(a) No deduct ion is made for these payments to arrive at the figures
of net output given in this report
(b) For details see Table 11
(c) Excluding telex for 1963

TABLE 13 Percentage analysis of twelve-month periods covered by returns from larger establishments, 1968
Establishments employing 25 or more persons:
Analys is of returns received, United Kingdom

| Year ended | Percent age <br> of <br> total returns <br> received | Percent age <br> of <br> total number <br> employed |
| :--- | :---: | :---: |
| 1968 | Per cent. | Per cent. |
| April (a) | 1.7 | 0.6 |
| May | 0.8 | 0.4 |
| June | 4.2 | 2.2 |
| July | 0.0 | 0.0 |
| August | 9.2 | 4.8 |
| September | 22.5 | 20.7 |
| October | 0.8 | 0.2 |
| November | 0.8 | 4.9 |
| December | 13.3 | 19.0 |
| 1969 |  |  |
| January | 6.7 | 5.1 |
| February | 5.0 | 25.6 |
| March | 35.0 | 16.4 |
| April (b) | 0.0 | 0.0 |


[^0]:    (a) Excluding tyres and other spare parts for road goods vehicles

