## BOARD OF TRADE

## The Report on the

## Census of Production

 for 1954
## Volume 2: Industry C

FERTILISER, DISINFECTANT, INSECTICIDE AND ALLIED INDUSTRIES

Presented by the Board of Trade to Parliament in pursuance of the Statistics of Trade Act, 1947 ( 10 \& 11 Geo. 6 Ch. 39, Sec. 7)

## LONDON: HER MAJESTY'S STATIONERY OFFICE

# The Report on the Census of Production for 1954 

VOLUME 2, INDUSTRY C
FERTILISER, DISINFECTANT, insecticide and allied industries

THIS REPORT on the Fertiliser, Disinfectant, Insecticide and Allied Industries relates to establishments engaged wholly or mainly in the manufacture of artificial manures, fertilisers, disinfectants, insecticides, sheep and cattle dips and weedkillers, including two Government establishments in 1948 and 1951 and one in 1954.

This industry corresponds to minimum list heading $31(2)$ in the Standard Industrial Classification.

LIST OF tables

## $1+2$

IMPORTANT NOTES and definitions appear on the next page. In inter-
preting the data in the tables, it is essential to bear these in mind.
ing oil, gas and electricity) for all purposes: packing
 nd parts for machinery purchased as replacementr.
Purchase of qoods for merchanting are excluded. The
coit of materials and fuel used, qiven in Table
is
 obtained by adjusting purch
year in the value of stocks.
Stods: Firms rere required to give stocks of materials
and fuel. procuct on hand for sale, and work in proand fuel. products on hand
gress. at income tax values.
Customs and Excise Duty paid on materials purchased is
normally included in the cost of materials. Finished normally included in the cost of materials. Finished
goods are similarly valued as they were sood. duty-paid
orduty-free. The net amount of any duty paid is deducted in arriving at net outpu
Employment: Total employment includes working propriet
orse, administrative. technical and clerical employee ors. administrative. technical and clerical employees
and operatives. but exclude outworkers. canteen employ
ees and porsons engaged in merchanting or any other ac ees and porsons engaged in merchanting or any other ac
it ivity not covered by of firm $s$ return. who are show
 surance cards were held by employers). whether employed
full-time or part-t ime. horking proprie tors are proprietors of businesses other
than limited companies. toge ther with members of the in than limited companies. toge ther with members of their
families who worked in the business without receiving
 half the normal hours are excluded. For Northern
Ireland directors of of imited companies (other than those
paid by fee only) are also included.
Administrative, technical and clerical employees include
directors, other than those paid by fee only (except in directors, other than those paid by fee on Y (except in
Northern Ireland): managers. superintendents and works
 Operatives include all other classes
broadly speaking. all manual workers. Outworkers are persons employed by the firm who work on
materials supplied by the firmin their own homes. Wages and salaries include all overtime payments. bonus-
es and commissions
nithout any deductions for incone tax
for es and commissions without any deductions for income tax,
innurances. contributory pensions etc. They exclude
ins. insurances, contributory pens
Capital expenditure includes expenditure on new building
work, and on plant, machinery and vehicles. charged to capital account during the year. including any transpo and installation costs involved. It includes expendi
ture in respect of estabishments in Great Brita in whic had not be gun production be fore the end of the year
(minh has not previousp been included in the Census of
production reports for individual industries) Production reports for individual industries) Symbols used:
for not available
for nill or negligible (less than half the final
digit shown).
 cies between the sums of constituent it items and the tot-
als shown. In some cases. figures have been combined ith others of a similar nature where publication o
separate details might disclose information relating to separate de tails might di
an individual undertaking
 urther proce
re produced.
Larger establishments: The information given in the re
port relates mainly to
larger establishments. establishments of firms employing on the average mor
than 10 permons. In most cases an estabismment com-
rises the whole of the premises under the scme owner
 ther a=ciliary places of business situated apart from
 Small firms are those employing on the average 10 o
The estimates for the industry as a whole given in
Table ine normallo obtained by increasing the the
items shown in the same proportion as total employment Gross output (production) is the total value of goods

Net output is the amount left after deducting from the
value of gross output the aggregate of the cost of mat
 This represents the value andedo to materials by the pro
cess of product ion, and constitute the fund fom which
cages. salaries. rents. rates and taxes. odvertising and
 Sales means scles during the year of goods made in the
establianment covered by the return or made on comis. ion for it, whether produced in the year or not. The
oniue of sales is the net selling value. i.e. the
omount charged to customers. Whether on an ex-works or
delivered
 o.b. value

Materials and fuel. The total cost of materials and
fuel purchased inciudes ali purchases during the year
of materials for use in production, and of fuel (includ-
The following notes describe terms in general use
in the tables of the report. More detilled explan-
tions of the terms used and a description of the scope
 Industrial Classification: Establishments are classif ed to industries according to the nature of ther ith the
put and as far as possible. in con ormity with tandard Industrial Classification. Cortain provuct
identified as the principal products of individul
industries. the principal products for a given industry
 ollowed is that an establishment is classified to an
ndustry if its outut of the principal products of that industry accounted for o greater proportion of the value
of its output than did its output of the principal products of any other indus try.
Secialist producers normally comprise those establish-
nents 50 per cent. or more of whose total output by ments so per cent. or more of whe total output by
aniu is accounted for by the characteristic products of
the specialist group.
termediate products: For some industries figures ar

| TABLE 1 |
| :--- |


b) Capital expenditure on new building work, plant, machinery and vehicles, (including (except in 1 ision that
incurred in creat fritain for estan) ishments not yet in production). less amounts received for plant,
machinery, and vehicles disposed of.

Surmary of returns received
TABLE 2
Sury of retur reived

|  | Unit | $\begin{gathered} \text { Great } \\ \text { Britain } \\ 1948 \end{gathered}$ | United Kingdom |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1951 | 1954 |
| firms employing on average more than 10 persons |  |  |  |  |
| Number of establishments | No. | 172 | 174 | 153 |
|  | £ 000 | 31.530 1,524 | $\begin{array}{r}60.654 \\ \hline 2.730\end{array}$ | 79.482 5.686 |
|  | ." | $\begin{array}{r}1.524 \\ +\quad 285 \\ \hline\end{array}$ |  | $\begin{array}{r}\text { 5.684 } \\ +\quad 644 \\ \hline 80.046\end{array}$ |
|  |  |  |  |  |
| Purchases of materials and fuel | " | 21.445 | 42.343 | 51.404 |
| Stocks of materials and fuel $\begin{aligned} & \text { at beginning of year } \\ & \text { change during year }\end{aligned}$ | ". | 21.261 $+\quad 333$ |  | 5.224 $+\quad 185$ |
| Cost of materials and fuel used | ." | 21.112 | 39.631 | 51.218 |
| Payment for mork done on materials given o Payment for transport (b) | " | 164 | 1388 2.797 | 4.470 |
| Net output (c) |  | 10.773 | 20.395 |  |
| Average number of employees $\left\{\begin{array}{l}\text { operatives } \\ \text { others }\end{array}\right.$ | No. | ${ }_{\substack{11.315 \\ 3 \\ 3 \\ \text { al3 }}}^{\text {d }}$ |  | 14.323 |
| Total employment (e) \{others | . | (15.254 | - $\begin{array}{r}\text { 5, } 6145 \\ 21.421\end{array}$ |  |
| Net output per person employed (e) | \% | 706 | 952 | 1.220 |
| Wages and salaries $\quad\left\{\begin{array}{l}\text { of operatives } \\ \text { of others }\end{array}\right.$ | £.000 | 3.374 1.676 | ${ }_{3}^{5.971}$ | 6.694 |
|  |  |  |  |  |
| Capital expenditure New building work (f) |  |  |  |  |
| Plant and machinery $\quad\left\{\begin{array}{l}\text { acquisitions } \\ \text { disposals }\end{array}\right.$ | ". | 573 15 15 | 2.539 45 | 2,574 |
| Vehicles $\left\{\begin{array}{l}\text { acquisitions (f) } \\ \text { diserals }\end{array}\right.$ | ". | 117 | 180 | 186 |
| Vehicles \{disposals | . | 13 | 34 | 57 |


| TABLE 2 (contd.) |
| :--- |

(d) Number in eek ended September 225 , 1948 .
(e) Excluding outworkers and including wrking proprietors.
(f) Excluding expenditure for establishments not yet in prod
(f) Excluding expenditure for establishenten pot yet in production.
(9) Excluding ing Northe rn Ireland. No information about small firms was collected in Northern Ireland
for 1951 .

Analysis by size, 1954
Larger establishments in the United Kingdom

| Ave rage number <br> employed (a) | $\begin{aligned} & \text { Estab- } \\ & \text { lish- } \\ & \text { ments } \end{aligned}$ | Grossoutput | $\begin{gathered} \text { Net } \\ \text { Nutput } \end{gathered}$ | Employees |  | Wages and salaries |  | $\underset{\substack{\text { Capital } \\ \text { expenditure } \\ \text { (b) }}}{ }$ | Net outputper personemployed(a) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Operatives | Others | Operatives | Others |  |  |
|  | Number | $8^{\prime} 000$ | $\varepsilon^{\prime} 000$ | Number | Number | \&. 000 | \&. 000 | \&. 000 | $\varepsilon$ |
| 11-24 | 35 | 2.708 | 599 | 439 | 190 | 173 | 108 | 65 | 944 |
| 25-49 | 41 | 5,452 | 1,356 | 982 | 481 | 369 | 277 | 104 | 927 |
| 50-99 | 26 | 6.559 | 1.779 | 1,309 | 555 | 526 | 338 | 199 | 954 |
| 100-199 | 26 | 13,960 | 4,097 | 2,385 | 1,135 | 1,044 | 680 | 363 | 1,164 |
| $200-299$ | 15 | 14,482 | 4.917 | 2,376 | 1,166 | 1.097 | 733 | 361 | 1,386 |
| 300-399 | 5 | 11.312 | 3.038 | 1,459 | 328 | 647 | 215 | 110 | 1,700 |
| 400 and over | 5 | 25,574 | 8,572 | 5,373 | 1,772 | 2.840 | 1.410 | 1.948 | 1.200 |
| Total | 153 | 80,046 | 24,358 | 14,323 | 5,627 | 6,694 | 3,762 | 3.149 | 1.220 |


| TABLE 5 (contd.) |
| :--- |


|  | 1954 |  |  | Principal ndustries $i$ which produced (a) |
| :---: | :---: | :---: | :---: | :---: |
|  | Quantity | Value | Entries |  |
|  | Th.tons | \&. 000 | Number |  |
| Fertilisers, prepared or manufactured Simple fertilisers |  |  |  |  |
|  |  |  |  |  |  |
| Phosphatic      <br> Basic slag, ground  389.7 1,157 10 3B |  |  |  |  |
| Phosphate rock, ground |  |  |  |  |
| Calcium superphosphate, single |  |  |  | 18, 20, ${ }^{25}$, 9 |
| Ammonium sulphate (in terms of 20.6 per cent. nitrogen) |  |  |  |  |
|  |  |  |  |  |  |
| Other prepared or manufactured fertilisers |  |  |  |  |
| Meat meal. meat and bone meal. bone meal. <br> steamed bone flour and meal. and hoof and |  |  |  |  |
| Other kinds | 9.3 | 130 17 | ] 17 | 1B, 20. 2Q, 8E |
| Total simple fertilisers | 515.3 | ${ }_{342}{ }^{\text {3 }}$ | f .. |  |
|  |  |  |  |  |
| Compound fertilisers | 48.4 | ${ }_{398}$ |  | 2E. 6C. 9C |
| Disinfectants, antiseptics, insecticides, weedkillers, sheep and cattle dips and like products |  |  |  |  |
| Coal tar disinfectants, antiseptics and sheep and cattle dips and dressings | $3.8$ | 237 53 | \} 25 | 2D. 2G, 2J, 9C |
| Other disinfectants and antiseptics | 3.6 | 441 178 | \|\} 34 | 2B. 2D, 2F. 20 |
| Other sheep and cattle dips and dressings |  |  |  | 2b. 2D. 2F. 20 |
| Agricultural and horticultural insecticides, fungicides and weedkillers |  |  |  |  |
| Weedkillers | 12.5 | 2.394 260 | \} 30 | 2D. 2E, 2F |
| Other agricultural and horticultural insecticides and fungicides | 17.5 | 2.009 | 29 | 2B, 2D. 2E, 2F |
| Industrial and household insecticides. rodenticides. | 1.9 | 356 116 | 3 ${ }^{43}$ | 2E, 2F, $2 \mathrm{G}, 2 \mathrm{M}$ |
| Other, not specified above | 0.5 | 133 166 | ] 16 | 2B, 2F, 2G, 2R |
| Total |  | 10.965 | . |  |

[^0]| 1954 |  |
| :---: | :---: |
| Quantity | Value |
| $\begin{aligned} & \text { Th. tons } \\ & 42.0 \end{aligned}$ | $£^{\cdot}{ }_{372}^{000}$ |
| .. | 364 |
| 6.3 | 195 177 |
| $\underset{\substack{\text { Th. } 1 \mathrm{lb} \\ 376.1}}{ }$ |  |
| 376.1 . | 568 |
| $\xrightarrow[\substack{\text { Th. tons } \\ 5.1}]{ }$ | 182 |
| 6.2 | $536$ |
| . | 117 |
| Th.cwt. |  |
| 156.1 | 627 |
| .. | 2.580 |
|  | 5.903 |

Total make of intermediate products Larger establishments in the United Kingdom
TABLE 8


[^1] Ammonium sulphate only, Owing to the risk of disclosure of information relating to individual firms
separate particulars. cannot be given for other nitrogenous fertilisers.

FERTILISER, DISINFECTANT, INSECTICIDE AND ALLIED INDUSTRIES Purchases of materials and fuel, 1954 Larger establishments in the United Kingdon

|  | Quantity | Cost |
| :---: | :---: | :---: |
|  | Th.tons | £. 000 |
|  | 123.8 | 715 |
| Sulphur | 40.6 | 583 |
| Spent oxide | 26.2 | 82 |
| Acids |  |  |
| Sulphuric acid, in terms of 100 per cent. acid | 214.1 | 1,853 |
| High boiling tar acids \{ | 0.7 | 38 28 |
| Basic slag (unground) | 427.7 | 1.014 |
| Phosphate rock (mineral phosphates of 11 me ) | 879.2 | 5.102 |
| Calcium superphos phate |  |  |
| Single | 237.6 | 2.743 |
| Potassium salts |  |  |
| Chloride (muriate) | 361.8 | 5,153 |
| Sulphate | 9.2 | 181 |
| other | $\stackrel{0}{ }{ }^{-}$ | ${ }_{2}^{5}$ |
| Ammonium sulphate (in terms of 20.6 per cent. nitrogen) | 513.1 | 7.233 |
| Other nitrogenous fertilisers | 164.3 | 2.094 |
| Bones and bone pieces, raw and degreased, including horns and hoofs | 9.7 | 163 19 |
| Meat meal. meat and bone meal, bone meal, steamed bone flour and meal, and hoof and horn meal | 12.1 | 323 |
| Filling materials |  |  |
| Organic (e.g. cocoa shell, peat, hops, etc.) | 15.8 | 88 92 |
| Inorganic (e.g. slate dust, diatomite, ete.) | 103.9 | 163 |
| Copper sulphate |  | 33 |
| Cresols and cresylic acid | 74.3 | 19.4 |
| Creosote ofls (including cresylic creosote) | $\begin{array}{r} \text { Th } \quad \text { gal. } \\ 2,475 \end{array}$ | 185 |
| Dichloro-diphenyl-trichloroe thane (D.D.T.) | Th. ${ }_{\text {cut. }} \mathbf{1 6 . 0}$ | 196 |
| Mineral oils (other than for fuel) \{ | Th. 9 gal. 1. 107 . | 155 40 |
|  |  |  |
| Vegetable oils | 36.0 | ${ }_{28}^{201}$ |
| Nicotine and nicotine sulphate in terms of nicotine | . | 10 |
| xylenols | 19.5 | 310 |
| Packing materials Jute sacks and bags | Th. |  |
| Jute sacks and bags ${ }_{\text {Timber and containers made of timber }}$ | 23.172 .. | 1.985 216 |
| Paper and board and contatners made of paper and board | .. | 2.480 |
| Other packing materials | .. | 1.429 |
| All other purchased materials | .. | 11.655 |


|  | Quantity | Cost |
| :---: | :---: | :---: |
|  | Th.tons | £. 000 |
| Fuel and electricity |  |  |
| Coal | 921.0 | 3.241 |
| Coke | 19.7 | 108 |
| Liquid fuels (including creosote/pitch mixtures) |  |  |
| For use in internal combustion engines | Th.gal. |  |
| Motor spirit (petrol) for use in road vehicles and derv. fuel | 1.092 | 242 |
| Other | 152 | 10 3 |
| For burning in furnaces, boilers, kilns, etc. | 1.207 | 57 |
| Gas purchased | Th.therms |  |
| From Gas Boards |  |  |
| From other sources, including other departments of the same firms | 3.306 | 76 |
| Electricity purchased | Th. kWh . |  |
| From Electricity Boards | 206.182 | 790 |
| From other sources, including other departments of the same firms | 26,300 | 87 |
| All other purchased fuel |  | - |
| Total cost |  | 51,404 |

Average number of employees and wages, salaries and superannuation payments (a)
Larger establishments in the United Kingdom

|  | 1951 | 1954 |
| :---: | :---: | :---: |
| Average number of employees | Number | Number |
| Administrative, technical and clerical employees | $\begin{gathered} 15.784 \\ 5,615 \\ \hline \end{gathered}$ | $\begin{gathered} 14.323 \\ 5.627 \\ 5 . \end{gathered}$ |
| Total | 21,399 | 19,950 |
| Wages and salaries paid to | £. 000 | ع'000 |
| Administrative, technical and clerical employees | $\begin{aligned} & 5.971 \\ & 3,045 \end{aligned}$ | - $\begin{array}{r}6.694 \\ 3.762\end{array}$ |
| Total | 9,016 | 10.456 |



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[^0]:    (a) The volume number and

[^1]:    (b) Ammonium sulphate only. Owing to the risk of ear

