

S
593
R62
1906
Suppl.
Biological
& Medical
Serials

LAWES AGRICULTURAL TRUST.

Rothamsted Experimental Station,
Harpenden.

ANNUAL SUPPLEMENT

TO

“Guide to the Experimental
Plots, 1906,”

CONTAINING THE YIELDS PER ACRE FOR 1906.

In every case the page, table, and plot numbers refer to the
“Guide,” it being understood that no change is made in the
manuring, &c., there described.

A. D. HALL,
Director.

ST. ALBANS :

PRINTED BY W. CARTMEL AND SONS, VICTORIA STREET.

1907.

*Subscribers & Donors to the Rothamsted
Experimental Station,
1904 and since.*

THE GOLDSMITHS' COMPANY (ENDOWMENT FOR SOIL INVESTIGATION).
J. F. MASON, Esq., M.P. (THE JAMES MASON LABORATORY).
THE PERMANENT NITRATE COMMITTEE.
THE FERTILISER MANUFACTURERS' ASSOCIATION.
THE POTASH SYNDICATE.
THE CLOTHWORKERS' COMPANY.
A. D. ACLAND, Esq.
THE RIGHT HON. LORD AVEBURY, F.R.S.
SIR JAMES BLYTH, BART.
E. HILDRED CARLILE, Esq., M.P.
W. T. COLES, Esq.
SIR R. P. COOPER, BART.
H. SHEPHERD CROSS, Esq.
MESSRS. ELLIS AND EVERARD.
SIR JOHN EVANS, K.C.B., F.R.S.
SIR WALTER GILBEY, BART.
EUSTACE GURNEY, Esq.
H. TYLSTON HODGSON, Esq.
A. B. HOLINSWORTH, Esq.
W. B. KEEN, Esq.
SIR CHARLES LAWES-WITTEWRONGE, BART.
DR. HUGO MÜLLER, F.R.S.
HENRY S. NUNN, Esq.
MARLBOROUGH R. PRYOR, Esq.
WILLIAM RANSOM, Esq.
THE RIGHT HON. LORD ROTHSCHILD.
B. S. ROWNTREE, Esq.
FREDERICK SEEBOHM, Esq.
B. STANIER, Esq.
DR. J. AUGUSTUS VOELCKER, M.A.
THE RIGHT HON. LORD WALSHINGHAM, F.R.S.
W. R. WOOLRYCH, Esq.

RAINFALL AND DRAINAGE, 1906.

(Page 16, Table IX.)

| | Rain. | | | Drainage. | | | Bright Sun- shine. | Temperature. | |
|---------------|----------------------|---------------------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|--------------|------|
| | Total Fall. | | No. of Rainy Days. | Soil 20 ins. deep. | Soil 40 ins. deep. | Soil 60 ins. deep. | | Max. | Min. |
| | 5-inch Funnel Gauge. | $\frac{1}{1000}$ th Acre Gauge. | | | | | | | |
| | Inches. | Inches. | No. | Inches. | Inches. | Inches. | | Hours. | °F. |
| January ... | 4.038 | 4.093 | 22 | 3.380 | 3.607 | 3.525 | 74.9 | 46.7 | 35.3 |
| February ... | 2.282 | 2.330 | 18 | 1.476 | 1.575 | 1.551 | 84.9 | 43.3 | 31.5 |
| March ... | 1.544 | 1.635 | 18 | 0.421 | 0.539 | 0.526 | 122.6 | 47.6 | 33.7 |
| April ... | 0.739 | 0.795 | 7 | 0.016 | 0.045 | 0.076 | 226.1 | 55.5 | 33.5 |
| May ... | 1.333 | 1.377 | 16 | 0.005 | 0.015 | 0.043 | 151.2 | 60.1 | 43.5 |
| June ... | 3.422 | 3.606 | 10 | 1.623 | 1.571 | 1.578 | 239.9 | 66.6 | 46.7 |
| July ... | 0.383 | 0.419 | 7 | 0.009 | 0.053 | 0.056 | 271.8 | 71.6 | 51.5 |
| August ... | 1.171 | 1.245 | 10 | 0.002 | 0.005 | 0.003 | 253.4 | 73.3 | 52.6 |
| September ... | 1.065 | 1.146 | 12 | ... | ... | ... | 206.1 | 67.3 | 47.2 |
| October ... | 5.160 | 5.297 | 20 | 3.033 | 2.914 | 2.858 | 95.8 | 58.8 | 45.7 |
| November ... | 4.081 | 4.217 | 17 | 3.660 | 3.811 | 3.721 | 46.2 | 50.5 | 39.4 |
| December ... | 2.795 | 2.789 | 18 | 2.325 | 2.343 | 2.319 | 59.9 | 40.8 | 31.3 |
| Total or Mean | 28.013 | 28.949 | 175 | 15.950 | 16.478 | 16.256 | 1832.8 | 56.8 | 41.0 |

MANGEL WURZEL. BARN FIELD.

(Page 11, Table VI.)

| Strip. | O. | N. | A. | A C. | C. |
|--------|-----------------------|----------------------------------|-----------------|-----------------|-----------------|
| | Tons. | Tons. | Tons. | Tons. | Tons. |
| 1 | { R. 20.39 L. 4.14 | { 30.31 5.76 | { 25.69 4.90 | { 26.82 5.22 | { 25.26 4.43 |
| 2 | { R. 20.94 L. 3.47 | { 30.24 5.42 | { 30.95 6.18 | { 32.06 6.88 | { 30.10 5.12 |
| 4 | { R. 5.51 L. 1.39 | { 13.98 16.62 4.31 5.01 | { 12.29 3.85 | { 26.31 5.09 | { 23.18 3.04 |
| 5 | { R. 5.91 L. 1.33 | { 14.30 3.70 | { 3.85 2.16 | { 6.57 2.31 | { 8.93 2.30 |
| 6 | { R. 5.31 L. 1.21 | { 17.23 3.64 | { 16.38 3.52 | { 25.28 5.49 | { 21.66 2.98 |
| 7 | { R. 5.44 L. 1.42 | { 21.92 3.98 | { 16.95 2.94 | { 28.19 5.13 | { 24.68 3.39 |
| 8 | { R. 3.67 L. 1.13 | { 10.25 3.74 | { 6.36 3.06 | { 8.05 2.58 | { 9.93 2.43 |

HAY. THE PARK GRASS PLOTS.

(Page 19, Table XI.)

| FIRST CROP. | | | | | | | |
|--------------|--------------------------|-----|-----|-----|-----|-----|------|
| Plot. | Produce of Hay per Acre. | | | | | | |
| | Cwt. | | | | | | |
| 3 | | | | | | | 12.0 |
| 12 | ... | ... | ... | ... | ... | ... | 15.3 |
| 2 | ... | ... | ... | ... | ... | ... | 15.7 |
| 1 | ... | ... | ... | ... | ... | ... | 18.7 |
| 4-1 | ... | ... | ... | ... | ... | ... | 14.4 |
| 8 | ... | ... | ... | ... | ... | ... | 20.4 |
| 7 | ... | ... | ... | ... | ... | ... | 37.9 |
| 6 | ... | ... | ... | ... | ... | ... | 29.6 |
| 15 | ... | ... | ... | ... | ... | ... | 34.3 |
| 5 | ... | ... | ... | ... | ... | ... | 10.9 |
| 17 | ... | ... | ... | ... | ... | ... | 28.8 |
| 4-2 | ... | ... | ... | ... | ... | ... | 25.5 |
| 10 | ... | ... | ... | ... | ... | ... | 30.7 |
| 9 | ... | ... | ... | ... | ... | ... | 44.5 |
| 13 | ... | ... | ... | ... | ... | ... | 17.4 |
| 11-1 | ... | ... | ... | ... | ... | ... | 47.3 |
| 11-2 | ... | ... | ... | ... | ... | ... | 63.6 |
| 16 | ... | ... | ... | ... | ... | ... | 38.9 |
| 14 | ... | ... | ... | ... | ... | ... | 44.0 |
| SECOND CROP. | | | | | | | |
| 11-1 | ... | ... | ... | ... | ... | ... | 3.4 |
| 11-2 | ... | ... | ... | ... | ... | ... | 4.2 |
| 14 | ... | ... | ... | ... | ... | ... | 1.8 |

BOTANICAL COMPOSITION, PER CENT.

(Page 20, Table XII.)

| FIRST CROP. | | | |
|-------------|-----------|-------------|-------------|
| Plot. | Gramineæ. | Leguminosæ. | Miscellanæ. |
| | Per cent. | Per cent. | Per cent. |
| 3 | 45.6 | 8.3 | 46.1 |
| 4-1 | 39.8 | 11.9 | 48.3 |
| 8 | 34.8 | 12.5 | 52.7 |
| 7 | 48.3 | 21.7 | 30.0 |
| 6 | 41.0 | 30.3 | 28.7 |
| 15 | 50.4 | 24.4 | 25.2 |

WHEAT. BROADBALK FIELD.

(Page 26, Table XIV.)

| Plot. | Dressed Grain. | | Straw. |
|-------|----------------|--------------------|--------|
| | Yield. | Weight per Bushel. | |
| | Bushels. | lbs. | Cwt. |
| 2 | 43.6 | 64.2 | 38.5 |
| 3 | 15.2 | 63.0 | 10.2 |
| 5 | 17.1 | 63.4 | 12.5 |
| 6 | 27.7 | 64.2 | 22.7 |
| 7 | 37.7 | 65.0 | 32.4 |
| 8 | 47.5 | 64.8 | 42.0 |
| 9 | 32.9 | 63.9 | 26.9 |
| 10 | 22.8 | 63.1 | 16.6 |
| 11 | 22.8 | 62.5 | 17.7 |
| 12 | 29.8 | 63.5 | 24.1 |
| 13 | 40.9 | 64.9 | 36.0 |
| 14 | 30.6 | 64.0 | 25.1 |
| 15 | 42.2 | 65.1 | 36.0 |
| 16 | 43.1 | 64.2 | 38.5 |
| 17) | *43.5 | 64.0 | 34.4 |
| 18) | †29.5 | 63.2 | 21.8 |
| 19 | 36.8 | 64.4 | 29.6 |

* Produce by Ammonium Salts. † Produce by Minerals.

BARLEY. HOOS FIELD.

(Page 33, Table XVI.)

| Plot. | Dressed Grain. | | Straw. |
|-------|----------------|--------------------|--------|
| | Yield. | Weight per Bushel. | |
| | Bushels. | lbs. | Cwt. |
| 1 O | 11.0 | 54.9 | 6.6 |
| 2 O | 18.7 | 56.6 | 8.2 |
| 3 O | 14.5 | 56.0 | 7.9 |
| 4 O | 20.1 | 57.0 | 11.4 |
| 1 A | 24.7 | 56.4 | 14.2 |
| 2 A | 41.5 | 57.0 | 21.4 |
| 3 A | 28.1 | 57.6 | 18.4 |
| 4 A | 52.1 | 59.3 | 26.5 |
| 1 N | 30.1 | 56.8 | 16.9 |
| 2 N | 50.0 | 58.8 | 29.0 |
| 3 N | 31.0 | 57.7 | 19.4 |
| 4 N | 49.2 | 59.3 | 26.1 |
| 1 C | 41.6 | 58.6 | 21.6 |
| 2 C | 42.8 | 59.1 | 22.9 |
| 3 C | 39.8 | 59.1 | 22.3 |
| 4 C | 46.6 | 59.2 | 25.0 |
| 7-1 | 22.4 | 57.3 | 12.8 |
| 7-2 | 54.8 | 59.0 | 33.6 |

BARLEY. HOOS FIELD.

(Page 40, Table XIX.)

| Plot. | Dressed Grain. | | Straw. | Total Produce. |
|-------|----------------|--------------------|--------|----------------|
| | Yield. | Weight per Bushel. | | |
| | Bushels. | lbs. | Cwt. | lbs. |
| 1 | 9·2 | 57·0 | 5·5 | 1175 |
| 2 | 17·0 | 57·5 | 9·8 | 2116 |
| 3 | 36·0 | 58·5 | 21·1 | 4563 |
| 4 | 40·5 | 58·5 | 24·8 | 5226 |

WHEAT AFTER FALLOW.

HOOS FIELD.

(Page 41, Table XX.)

YIELD PER ACRE.

| | | | |
|---------------|-----|-----|--|
| Dressed Grain | ... | ... | { Yield—13·4 bushels. Weight per bushel—63·4 lbs. |
| Straw | ... | ... | |
| Total Produce | ... | ... | 2340 lbs. |

INOCULATION OF LEGUMINOUS PLANTS.
HOOS FIELD.

(Page 40 and plan page 37).

PRODUCE OF RED CLOVER (HAY) IN 1906.

1. EFFECT OF INOCULATING THE SOIL.

| Plot. | Soil inoculated with— | Mean of Plots 6, 8, and 10. 1st and 2nd Crops. |
|-------|--|--|
| A ... | Hiltner's Preparation from Munich | Cwt. 76·4 |
| B ... | Moore's Preparation from the United States ... | 72·9 |
| C ... | Soil from a field which had carried Red Clover in 1904 | 68·4 |
| D ... | Left uninoculated | 61·9 |

2. EFFECT OF PAST MANURING.

| Plot. | Mean of Plots, A, B, C, D. 1st and 2nd Crops. |
|-------|---|
| 6 | Nitrate of Soda 1876-1901, since unmanured ... |
| 8 | Nitrate of Soda and Mixed Minerals 1876-1901, since unmanured |
| 10 | Mixed Minerals only 1876-1901, since unmanured... |

3. DETAILS OF THE ABOVE.

| Plot. | 1st Crop. | 2nd Crop. | Total. |
|-------|-----------|-----------|--------|
| | Cwt. | Cwt. | Cwt. |
| 6 A | 31·8 | 33·0 | 64·8 |
| 6 B | 36·5 | 37·5 | 74·0 |
| 6 C | 28·8 | 28·5 | 57·3 |
| 6 D | 25·8 | 22·5 | 48·3 |
| 8 A | 51·4 | 37·5 | 88·9 |
| 8 B | 48·4 | 34·5 | 82·9 |
| 8 C | 43·9 | 30·0 | 73·9 |
| 8 D | 40·9 | 31·5 | 72·4 |
| 10 A | 43·9 | 31·5 | 75·4 |
| 10 B | 39·4 | 22·5 | 61·9 |
| 10 C | 42·4 | 31·5 | 73·9 |
| 10 D | 37·9 | 27·0 | 64·9 |

Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation