

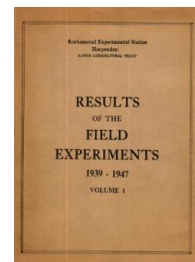
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Yields of the Field Experiments 1939-1947 Volume 1

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A/4 Agdell - Rotation

Rothamsted Research

Rothamsted Research (1948) *A/4 Agdell - Rotation* ; Yields Of The Field Experiments 1939-1947
Volume 1, pp 19 - 20 - DOI: <https://doi.org/10.23637/ERADOC-1-145>

A/4.1

CROPS GROWN IN ROTATION - AGDELL FIELD

The experiment, which began in 1848, compares two crop rotations, one with clover and the other with fallow, and the effect of mineral manure with and without nitrogen applied to the root crops.

Area of each plot, 2/5 acre.

Rotations: Turnips or swedes, barley, clover or beans, wheat.
 Turnips or swedes, barley, fallow, wheat.

Until 1904, half of each plot of turnips was fed on the land, the remainder being carted off. Subsequently all the roots were carted.

Treatments and rates of dressing.

Applied to the root crops only (all amounts per acre):
 None;

Mineral manure, with no nitrogen: Superphosphate, 84 lb. P₂O₅;
 Sulphate of potash, 245 lb. K₂O; sulphate of soda, 100 lb;
 sulphate of magnesia, 200 lb.

Complete mineral and nitrogeneous manure: As above, together with sulphate of ammonia, 43 lb. N and 2,000 lb. castor bean meal or rape dust.
~~per acre.~~

Crop Notes.

| Year | Crop | Sown | Harvested | Variety |
|------|--------------|---------------|-----------|-------------------------|
| 1939 | Wheat | Oct. 27, 1938 | Aug. 15 | Red Standard |
| 1940 | Turnips | May 31 | Nov. 28 | Bruce |
| 1941 | Barley | March 19 | Sept. 10 | Plumage Archer |
| 1942 | Clover | May 9, 1941 | June 29 | Montgomery Red |
| 1943 | Wheat | Oct. 15, 1942 | Aug. 2 | Red Standard |
| 1944 | Swedes | June 23 | Nov. 5 | Mixed seed |
| 1945 | Barley | March 9 | Aug. 14 | Plumage Archer |
| 1946 | Clover | April 6, 1945 | June 24 | Montgomery Red |
| 1947 | Winter wheat | Nov. 6, 1946 | Aug. 12 | Squareheads Master 13/4 |
| 1947 | Spring wheat | April 18 | Aug. 21 | Atle |

In 1940 the turnips, especially those on plots 1 and 2, were badly attacked by Finger and Toe disease.

In 1944 three varieties of swedes and eleven varieties of turnips were sown in strips down each plot. The turnips on all plots failed, as did also the swedes on plots 5 and 6; all plots were attacked by disease, plots 3 and 4 less severely than the rest.

In 1947 the wheat wintered badly, and it was decided to resow all of plots 1, 3 and 5 and the west side of plots 2, 4 and 6 with spring wheat.



A/4.2

| | | Produce per acre | | | | | | |
|----------------------|-----------------|------------------|------------------------|----------------------------|---|------|------------------------|------|
| Year | Crop | | O | | M | | C | |
| | | | Unmanured since 1848 | Mineral Manure No nitrogen | Complete mineral and nitrogenous manure | | | |
| | | | 5 | 6 | 3 | 4 | 1 | 2 |
| | | | Clover or Fallow beans | | Clover or Fallow beans | | Clover or Fallow beans | |
| Twenty-third Course | | | | | | | | |
| 1936 | Roots (Turnips) | tons | 1.22 | 0.47 | 2.69 | 2.55 | 5.63 | 3.26 |
| 1937 | Barley | | | | | | | |
| | Grain* | cwt. | 0.5 | 0.3 | 3.1 | 0.5 | 0.6 | 1.0 |
| | Straw* | cwt. | 3.4 | 2.1 | 2.5 | 4.7 | 2.7 | 3.4 |
| 1938 | Clover hay | cwt. | - | 8.3 | - | 29.1 | - | 26.4 |
| 1939 | Wheat | | | | | | | |
| | Grain* | cwt. | 14.9 | 11.9 | 18.2 | 22.2 | 12.8 | 20.9 |
| | Straw* | cwt. | 26.3 | 19.9 | 32.9 | 36.6 | 24.9 | 33.2 |
| Twenty-fourth Course | | | | | | | | |
| 1940 | Root (Turnips) | tons | 0.52 | 0.14 | 3.96 | 5.09 | 2.76 | 2.71 |
| 1941 | Barley | | | | | | | |
| | Grain* | cwt. | 7.4 | 3.2 | 9.6 | 11.5 | 10.3 | 4.2 |
| | Straw* | cwt. | 11.9 | 10.8 | 16.6 | 20.2 | 12.9 | 18.6 |
| 1942 | Clover hay | cwt. | - | 10.0 | - | 39.9 | - | 32.9 |
| 1943 | Wheat | | | | | | | |
| | Grain* | cwt. | 19.7 | 17.7 | 24.7 | 27.4 | 21.2 | 27.1 |
| | Straw* | cwt. | 30.3 | 29.2 | 39.4 | 41.7 | 34.6 | 42.4 |
| Twenty-fifth Course | | | | | | | | |
| 1944 | Roots (Swedes) | tons | Failed | | 5.26 | 5.01 | 3.53 | 2.09 |
| 1945 | Barley | | | | | | | |
| | Grain* | cwt. | 12.4 | 9.5 | 19.8 | 20.9 | 24.9 | 20.6 |
| | Straw* | cwt. | 11.4 | 10.1 | 21.5 | 16.7 | 25.1 | 24.9 |
| 1946 | Clover hay | cwt. | - | 7.4 | - | 44.9 | - | 25.0 |
| 1947 | Winter wheat | | | | | | | |
| | Grain* | cwt. | - | 7.0 | - | 16.0 | - | 12.3 |
| | Straw* | cwt. | - | 13.3 | - | 24.9 | - | 17.3 |
| 1947 | Spring wheat | | | | | | | |
| | Grain* | cwt. | 12.8 | 10.4 | 20.3 | 18.6 | 18.5 | 16.8 |
| | Straw* | cwt. | 15.8 | 15.1 | 26.2 | 25.0 | 22.3 | 19.3 |

*Includes straw, cavings and chaff.