

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1955

[Full Table of Content](#)



55/R/BA/3 and 55/W/BA/3 Six-course Rotation

Rothamsted Research

Rothamsted Research (1956) *55/R/BA/3 and 55/W/BA/3 Six-course Rotation* ; Yields Of The Field Experiments 1955, pp 28 - 30 - DOI: <https://doi.org/10.23637/ERADOC-1-175>

55/Ba/3.1

SIX COURSE ROTATION EXPERIMENT

The 26th year

Seasonal effects of fertilizers - Rothamsted Long Hoos IV and Woburn Stackyard 1955.

For details of treatments, rotation etc., see "Results of the Field Experiments 1939-47" Vol.I, Section Ba/4.

Area of each plot: Rothamsted, 0.0250 acre. Woburn, 0.0266 acre.

Cultivations, etc.:

Rothamsted

Sugar beet.

Ploughed: Sept 6, 1954 and Nov 5. Fertilizers applied: Apr 15, 1955. Seed drilled at 18 lb per acre: Apr 16. Sprayed with D.D.T. emulsion, 3 pints in 40 gallons: June 13. Singled: June 20. Lifted: Nov 16. Variety: Klein E.

Barley.

Ploughed: Dec 27, 1954. Ground chalk applied at 20 cwt per acre: Mar 19, 1955. Seed drilled at 3 bushels per acre: Mar 22. Fertilizers applied: Mar 29. Harvested: Aug 8. Variety: Plumage Archer. Mean D.M.%: Grain, 81.8; Straw, 74.9.

Clover.

Seed undersown in barley at 40 lb per acre: Apr 20, 1954. Autumn fertilizers applied: Dec 1. Sulphate of ammonia applied: Apr 25, 1955. Cut: July 12. Variety: Late flowering Montgomery Red.

Wheat.

Ploughed: Aug 5, 1954. Seed drilled at $2\frac{3}{4}$ bushels per acre: Oct 22. Autumn fertilizers applied: Oct 25. Sulphate of ammonia applied: May 12, 1955. Harvested: Aug 8. Variety: Yeoman. Mean D.M.%: Grain, 81.6; Straw, 82.0.

Potatoes.

Ploughed: Sept 6, 1954 and Nov 4. Ridged, fertilizers applied: Apr 26, 1955. Potatoes planted: Apr 27. Earthed up: July 4. Sprayed with sulphuric acid, 15% B.O.V: Sept 26. Lifted: Oct 1. Variety: Majestic.

Rye.

Cultivated: Oct 4, 1954. Ground chalk applied at 20 cwt per acre: Oct 9. Seed drilled at 3 bushels per acre: Oct 22. Autumn fertilizers applied: Oct 25. Sulphate of ammonia applied: May 12, 1955. Harvested: Aug 15. Variety: King II. Mean D.M.%: Grain, 85.9; Straw, 87.5.

55/Ba/3.2

Woburn

Sugar beet.

Ploughed: Sept 29, 1954 and Feb 2, 1955. Fertilizers applied: Apr 18.
Seed drilled at 12 lb per acre: Apr 19. Sprayed with parathion, $\frac{1}{2}$
pint per acre in 40 gallons: June 10. Singled: June 28. Lifted:
Oct 27. Variety: Klein E.

Barley.

Ploughed: Nov 5, 1954 and Feb 1, 1955. Ground chalk applied at
20 cwt per acre: Mar 14. Fertilizers applied, seed drilled at $3\frac{1}{3}$
bushels per acre: Mar 17. Harvested: Aug 5. Variety:
Plumage Archer.

Clover.

Seed undersown in barley at 40 lb per acre: Apr 26, 1954. Autumn
fertilizers applied: Dec 2. Sulphate of ammonia applied:
Apr 29, 1955. Cut: July 6. Variety: Late flowering Montgomery
Red. N.B. The crop was severely and irregularly damaged by
Sclerotinia.

Wheat.

Ploughed: July 5, 1954 and Oct 1. Autumn fertilizers applied, seed
drilled at 3 bushels per acre: Oct 28. Sulphate of ammonia applied:
May 6, 1955. Sprayed with M.C.P.A. low volume, at $2\frac{1}{2}$ pints per acre:
May 20. Harvested: Aug 15. Variety: Squareheads Master 13/4.

Potatoes.

Ploughed: Sept 29, 1954 and Feb 1, 1955. Ridged, fertilizers
applied: Apr 21. Potatoes planted: Apr 22. Earthed up: June 28.
Sprayed with copper fungicide, 5 lb in 40 gallons per acre:
Aug 19. Sprayed with arsenious compound, 1 gallon in 40 gallons
per acre: Sept 27. Lifted: Oct 3. Variety: Majestic.

Rye.

Ploughed: Oct 23, 1954. Ground chalk applied at 20 cwt per acre,
autumn fertilizer applied: Oct 28. Seed drilled at 3 bushels per
acre: Oct 29. Sulphate of ammonia applied: May 6, 1955.
Harvested: Aug 15. Variety: King II.

Erratum to "Results of the Field Experiments" 1954!

Page 54/Ba/3.3:- After "clover, hay" read "(at 85% Dry Matter)" not
"dry matter".

Erratum to "Results of the Field Experiments" 1939-47, Vol. I.

Page Ba/4.4:- Woburn. Clover, Hay Dry Matter: cwt per acre.
Response to N in 1945 should read "-12.5" NOT "12.5".

55/Ba/3.3

Summary of Results

Mean yields per acre and responses in yield per cwt of N, P₂O₅ and K₂O

| | Rothamsted | Woburn | Rothamsted | Woburn |
|----------------|---|---------------------|---|--------|
| | Sugar Beet, roots (washed): tons per acre | | Barley, grain: cwt per acre | |
| Mean | 7.58 | 8.46 | 34.3 | 27.2 |
| Response to: N | +5.95 | +4.07 | +23.3 | +20.1 |
| P | +0.11 | -1.74 | +1.4 | +2.2 |
| K | -0.12 | -0.58 | -5.3 | +3.7 |
| | Sugar Beet, sugar percentage | | Barley, straw: cwt per acre | |
| Mean | 16.7 | 18.4 | 39.0 | 34.7 |
| Response to: N | +0.7 | -0.1 | +34.5 | +39.9 |
| P | +0.3 | +0.1 | +2.3 | +3.3 |
| K | +0.3 | +0.9 | -7.3 | +2.2 |
| | Sugar Beet, total sugar: cwt per acre | | Clover, hay: dry matter cwt per acre | |
| Mean | 25.4 | 31.1 | 54.0 | 46.0 |
| Response to: N | +21.1 | +14.6 | +13.3 | -9.5 |
| P | +0.8 | -6.2 | +7.9 | +2.5 |
| K | +0.1 | -0.6 | -2.0 | +12.8 |
| | Sugar Beet, tops: tons per acre | | Wheat, grain: cwt per acre | |
| Mean | 4.63 | 5.55 | 38.0 | 8.8 |
| Response to: N | +4.05 | +3.19 | +8.1 | +10.0 |
| P | -0.16 | -1.27 | -5.3 | +2.1 |
| K | -0.25 | +0.36 | +0.4 | +1.5 |
| | Sugar Beet, plant number: thousands per acre | | Wheat, straw: cwt per acre | |
| Mean | 28.3 | + | 56.1 | 12.6 |
| Response to: N | +0.9 | | +14.3 | +20.1 |
| P | -0.1 | | -7.0 | +2.5 |
| K | +0.9 | | +3.5 | +0.8 |
| | Potatoes, total tubers: tons per acre | | Rye, grain: cwt per acre | |
| Mean | 4.99 | 5.33 | 32.7 | 25.4 |
| Response to: N | +1.24 | +0.83 | +28.2 | +27.7 |
| P | +0.93 | +0.67 | -6.5 | -2.4 |
| K | +0.50 | -0.23 | -1.1 | -0.5 |
| | Potatoes, percentage ware | | Rye, straw: cwt per acre | |
| Mean | 83.1 ⁽¹⁾ | 85.4 ⁽²⁾ | 37.2 | 30.9 |
| Response to: N | -2.2 | -1.4 | +28.0 | +33.3 |
| P | -10.9 | -4.8 | -2.3 | +0.5 |
| K | +6.5 | +3.1 | -3.3 | -1.8 |

* (at 85% dry matter) + not recorded.

Riddle: (1) 1½"; (2) 1⅝"