

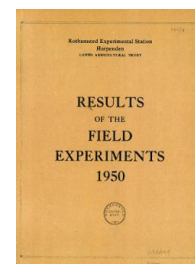
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Yields of the Field Experiments 1950

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50/BA/2 Three-course Rotation - Rothamsted

Rothamsted Research

Rothamsted Research (1951) *50/BA/2 Three-course Rotation - Rothamsted* ; Yields Of The Field Experiments 1950, pp 15 - 17 - DOI: <https://doi.org/10.23637/ERADOC-1-185>

50/Ba/2.1

THREE COURSE ROTATION EXPERIMENT

The 18th year

Ploughing in straw - Long Hoos VI 1950.

For details of rotation and treatments etc see Appendix Z.

Area of each plot: 0.0200 acre.

Cultivations, etc:

Potatoes (Series 1)

Adco, straw and accompanying artificials applied and ploughed in: Dec 10-12. Cultivated: Mar 21. Harrowed: Mar 27. Ridged, artificials applied, potatoes planted and covered in: Mar 31. Rolled down ridges: Apr 3. Harrowed: May 5. Grubbed: May 23. Weeded: June 12-13 and 21. Earthed up: June 26. Sprayed with "Perenox": July 24. Sprayed with "Coppesan": Aug 18. Sprayed with 15% B.O.V. to kill off haulms: Sept 25. Lifted: Oct 10. Variety: Majestic. Previous crop: Sugar beet.

Barley (Series 3)

Adco, straw and accompanying artificials applied and ploughed in: Dec 10-12. Springtined: Mar 8 and again Mar 10. Artificials applied: Mar 13. Seed drilled and harrowed in: Mar 14. Harvested: Aug 7. Variety: Plumage Archer. Previous crop: Potatoes.

Sugar beet (Series 2)

Adco, straw and accompanying artificials applied and ploughed in: Dec 10-12. Cultivated: Mar 21. Harrowed, artificials applied: Mar 27. Ring rolled: Mar 28. Seed drilled, harrowed in: Mar 29. Rolled: Mar 30. Hoed: May 19. Singled: June 2-6. Hoed: June 6, 8, 30 and July 14. Lifted: Nov 1. Variety: Klein E. Previous crop: Barley.

Standard errors per plot:

Potatoes,	Total clean tubers:	1.46 tons per acre or 10.7% (8 d.f.)
	Percentage ware:	2.37 (5 d.f.)
Barley,	Grain:	1.38 cwt per acre or 4.4% (8 d.f.)
	Straw:	2.78 cwt per acre or 6.9% (8 d.f.)
Sugar beet,	Roots (washed):	1.13 tons per acre or 7.5% (8 d.f.)
	Tops:	1.34 tons per acre or 14.3% (8 d.f.)
	Sugar percentage:	0.382 (8 d.f.)
	Total sugar:	4.29 cwt per acre or 7.5% (8 d.f.)
	Plant number:	1.23 thousands per acre or 5.3% (8 d.f.)

50/Ba/2.2

Summary of Results

Treatments applied 1948/49 Treatments applied 1949/50

	Art.	Adco	St 1	St 2	Mean	Art.	Adco	St 1	St 2	Mean
<u>Sugar Beet</u>										
Roots (washed) tons per acre	14.16	13.80 (±0.654)	13.75	15.07	14.19 (±0.327)	17.24	14.90 (±0.654)	16.54	15.82	16.13 (±0.327)
Tops tons per acre	8.11	8.52 (±0.775)	8.90	8.53	8.51 (±0.388)	10.68	9.56 (±0.775)	10.67	10.23	10.29 (±0.388)
Sugar Percentage	18.79	18.75 (±0.22)	19.00	18.86	18.85 (±0.110)	19.05	18.72 (±0.221)	18.93	18.47	18.80 (±0.110)
Total sugar cwt per acre	53.2	51.6 (±2.47)	52.2	56.9	53.5 (±1.24)	65.7	55.7 (±2.47)	62.6	58.4	60.6 (±1.24)
Plant number thous per acre	23.6	22.5 (±0.71)	23.6	22.9	23.1 (±0.35)	22.7	23.3 (±0.71)	22.9	22.7	22.9 (±0.35)
<u>Barley</u>										
Grain cwt per acre	29.5	30.4 (±0.80)	33.8	30.4	31.0 (±0.40)	31.2	30.4 (±0.80)	32.9	33.3	31.9 (±0.40)
Straw cwt per acre	39.6	38.1 (±1.60)	40.8	35.7	38.6 (±0.80)	42.5	36.8 (±1.60)	44.9	43.4	41.9 (±0.60)
<u>Potatoes</u>										
Clean tubers tons per acre	11.84	12.23 (±0.841)	13.24	14.04	12.84 (±0.420)	14.21	13.24 (±0.841)	14.57	15.14	14.29 (±0.420)
Percentage Ware	90.8	93.5 (±1.37)	91.6	92.8	92.2 (±0.69)	93.8	93.9 (±1.37)	91.1	92.4	92.8 (±0.69)

50/Ba/2.3

Responses to Magnesium Sulphate

Treatments applied 1948/49

Treatments applied 1949/50

	Art.	Adco	St 1	St 2	Mean	Art.	Adco	St 1	St 2	Mean
<u>Sugar Beet</u>										
Roots (washed) tons per acre	1.24	2.42 (±1.189)	1.52	0.08	1.31	0.04	0.69 (±1.369)	0.16	0.12	0.26
Tops tons per acre	0.17	3.64 (±1.645)	-1.42	-0.67	0.43	-1.02	0.94 (±1.645)	0.21	0.34	0.12
Sugar Percentage	0.63	-0.88 (±0.468)	-0.04	0.92	0.16	0.46	-1.00 (±0.468)	0.42	-0.32	-0.11
Total sugar cwt per acre	6.5	6.5 (±5.25)	5.7	3.0	5.4	1.8	-0.3 (±5.25)	2.1	-0.6	0.7
Plant number thous. per acre	0.8	-1.0 (±1.51)	1.7	0.5	0.5	1.6	-1.1 (±1.51)	1.5	-1.4	0.2
<u>Barley</u>										
Grain cwt per acre	-1.7	-1.9 (±1.69)	-4.3	-0.2	-2.0	-0.6	1.7 (±1.69)	1.8	1.4	1.1
Straw cwt per acre	0.2	1.6 (±3.41)	-4.7	-1.8	-1.2	-2.4	-0.4 (±3.41)	0.7	4.4	0.6
<u>Potatoes</u>										
Clean tubers tons per acre	-1.94	1.08 (±1.784)	2.76	1.15	0.76	0.26	-0.84 (±1.784)	-1.79	1.17	-0.30
Percentage Ware	-3.9	-3.0 (±2.91)	2.0	0.0	-1.2	0.0	0.0 (±2.91)	-5.4	-1.7	-1.8