

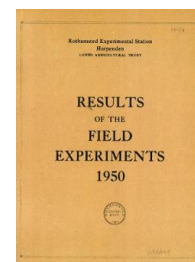
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Yields of the Field Experiments 1950

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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	13.75	15.07	14.19	17.24	14.90	16.54	15.82	16.13
		(±0.654)			(±0.327)		(±0.654)			(±0.327)
Tops tons per acre	8.11	8.52	8.90	8.53	8.51	10.68	9.56	10.67	10.23	10.29
		(±0.775)			(±0.388)		(±0.775)			(±0.388)
Sugar Percentage	18.79	18.75	19.00	18.86	18.85	19.05	18.72	18.93	18.47	18.80
		(±0.22)			(±0.110)		(±0.221)			(±0.110)
Total sugar cwt per acre	53.2	51.6	52.2	56.9	53.5	65.7	55.7	62.6	58.4	60.6
		(±2.47)			(±1.24)		(±2.47)			(±1.24)
Plant number thous per acre	23.6	22.5	23.6	22.9	23.1	22.7	23.3	22.9	22.7	22.9
		(±0.71)			(±0.35)		(±0.71)			(±0.35)
<u>Barley</u>										
Grain cwt per acre	29.5	30.4	33.8	30.4	31.0	31.2	30.4	32.9	33.3	31.9
		(±0.80)			(±0.40)		(±0.80)			(±0.40)
Straw cwt per acre	39.6	38.1	40.8	35.7	38.6	42.5	36.8	44.9	43.4	41.9
		(±1.60)			(±0.80)		(±1.60)			(±0.60)
<u>Potatoes</u>										
Clean tubers tons per acre	11.84	12.23	13.24	14.04	12.84	14.21	13.24	14.57	15.14	14.29
		(±0.841)			(±0.420)		(±0.841)			(±0.420)
Percentage Ware	90.8	93.5	91.6	92.8	92.2	93.8	93.9	91.1	92.4	92.8
		(±1.37)			(±0.69)		(±1.37)			(±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	1.52	0.08	1.31	0.04	0.69	0.16	0.12	0.26
		(±1.689)					(±1.369)			
Tops tons per acre	0.17	3.64	-1.42	-0.67	0.43	-1.02	0.94	0.21	0.34	0.12
		(±1.645)					(±1.645)			
Sugar Percentage	0.63	-0.88	-0.04	0.92	0.16	0.46	-1.00	0.42	-0.32	-0.11
		(±0.468)					(±0.468)			
Total sugar cwt per acre	6.5	6.5	5.7	3.0	5.4	1.8	-0.3	2.1	-0.6	0.7
		(±5.25)					(±5.25)			
Plant number thous. per acre	0.8	-1.0	1.7	0.5	0.5	1.6	-1.1	1.5	-1.4	0.2
		(±1.51)					(±1.51)			
<u>Barley</u>										
Grain cwt per acre	-1.7	-1.9	-4.3	-0.2	-2.0	-0.6	1.7	1.8	1.4	1.1
		(±1.69)					(±1.69)			
Straw cwt per acre	0.2	1.6	-4.7	-1.8	-1.2	-2.4	-0.4	0.7	4.4	0.6
		(±3.41)					(±3.41)			
<u>Potatoes</u>										
Clean tubers tons per acre	-1.94	1.08	2.76	1.15	0.76	0.26	-0.84	-1.79	1.17	-0.30
		(±1.784)					(±1.784)			
Percentage Ware	-3.9	-3.0	2.0	0.0	-1.2	0.0	0.0	-5.4	-1.7	-1.8
		(±2.91)					(±2.91)			