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# Yields of the Field Experiments 1958

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## 58/R/BA/2 and 58/W/BA/2 Six-course Rotation - Cereal Strips

### Erratum

Erratum (1959) *58/R/BA/2 and 58/W/BA/2 Six-course Rotation - Cereal Strips* ; Yields Of The Field Experiments 1958, pp 26 - 29 - DOI: <https://doi.org/10.23637/ERADOC-1-181>

58/Ba/2.1

## SIX COURSE ROTATION EXPERIMENT

The 29th year

Seasonal effects of fertilizers - Rothamsted Long Hoos IV and Woburn Stackyard 1958.

For history, treatments, etc., see "Details of the Classical and Long Term Experiments" 1956.

Area of each plot: Rothamsted, 0.0250 acres; Woburn, 0.0266 acres.

Cultivations, etc.:

### Rothamsted

Sugar beet.

Ploughed twice: Aug 22 and Nov 2, 1957. Fertilizers applied, seed drilled at 19 lb per acre: Apr 14, 1958. Singled: June 4. Sprayed with demeton methyl, 12 oz in 40 gallons per acre: July 7. Lifted: Nov 24. Variety: Klein E.

Barley.

Sugar beet tops spread: Nov 21, 1957. Ploughed: Nov 22. Ground chalk applied at 23 cwt per acre: Nov 23. Fertilizers applied: Mar 21, 1958. Seed drilled at  $2\frac{3}{4}$  bushels per acre: Mar 22. Clover seed undersown: Apr 25. Harvested: Aug 27. Variety: Plumage Archer.

Clover.

Seed undersown in barley at 40 lb per acre: May 20, 1957. Autumn fertilizers applied: Sept 23. Sulphate of ammonia applied: Apr 8, 1958. Cut: July 8. Variety: S123 Late Flowering Red.

Wheat<sup>‡</sup>

Ploughed twice: July 7 and Oct 9, 1957. Autumn fertilizers applied, seed drilled at  $2\frac{3}{4}$  bu. per acre: Oct 14. Sulphate of ammonia applied: Apr 9, 1958. Sprayed with CMPP, 6 pints in 40 gallons per acre: Apr 30. Harvested: Sept 3 - 11. Variety: Yeoman.

Potatoes.

Ploughed twice: Aug 22 and Oct 9, 1957. Ridged, fertilizers applied, potatoes planted: Apr 19, 1958. Earthed up: July 8. Sprayed 4 times with copper fungicide, 5 lb in 40 gallons per acre: July 12 and at 3 lb and 1 pint of spreader in 40 gallons per acre: Aug 1, 6 and 16. Sprayed with sulphuric acid, 20% BOV at 100 gallons per acre: Sept 9. Lifted: Sept 25. Variety: Majestic.

Rye.

Ploughed: Oct 9, 1957. Ground chalk applied at 23 cwt per acre: Oct 14. Autumn fertilizers applied, seed drilled at 3 bushels per acre: Oct 15. Sulphate of ammonia applied: Apr 9, 1958. Sprayed with CMPP, 6 pints in 40 gallons per acre: Apr 30. Harvested: Aug 26. Variety: King II.

<sup>‡</sup> Owing to severe lodging, yields from this crop were estimated from a 6 ft. wide sample cut from each plot (Area 0.0054 acres).



58/Ba/2.2

Woburn

Sugar beet.

Ploughed twice: Aug 29 and Nov 30, 1957. Fertilizers applied, seed drilled at 10 lb per acre: Apr 17, 1958. Sprayed with miscible DDT at 3 pints in 40 gallons per acre: May 3. Singled: June 6. Sprayed with demeton methyl, 12 oz in 40 gallons per acre: June 26. Lifted: Oct 15. Variety: Klein E.

Barley.

Ploughed: Nov 29, 1957. Fertilizers applied: Mar 19, 1958. Seed drilled at  $2\frac{1}{2}$  bushels per acre: Mar 20. Harvested: Aug 25. Variety: Herta.

Clover.

Ploughed: Aug 9 and 17, 1957. PK fertilizers applied: Aug 30. Seed broadcast at 40 lb per acre: Sept 5. Ploughed: Mar 4, 1958. Nitrogen fertilizers applied: Mar 19. Resown: Mar 24. Cut: July 14. Variety: Crimson Clover.

Wheat.

Ploughed twice: July 8 and Aug 29, 1957. Autumn fertilizers applied: Oct 17. Seed drilled at  $2\frac{1}{2}$  bushels per acre: Oct 26. Sulphate of ammonia applied: Apr 21, 1958. Sprayed with CMPP, 6 pints in 40 gallons per acre: May 3. Harvested: Aug 26. Variety: Yeoman.

Potatoes.

Ploughed twice: Aug 29, 1957 and Jan 14, 1958. Fertilizers applied, and potatoes hand planted: Apr 21. Earthed up: June 18. Sprayed with copper fungicide, 5 lb in 80 gallons per acre: July 14. Twice sprayed with copper fungicide, 5 lb in 40 gallons per acre: July 29 and Aug 16. Sprayed with arsenious compound, 1 gallon in 40 gallons per acre: Sept 12. Lifted: Oct 7. Variety: Majestic.

Rye.

Ploughed: Oct 5, 1957. Ground chalk applied at 20 cwt per acre: Oct 10. Fertilizers applied: Oct 17. Seed drilled at  $2\frac{1}{2}$  bushels per acre: Oct 26. Sprayed with CMPP, 6 pints in 40 gallons per acre: May 3, 1958. Sulphate of ammonia applied: Apr 21. Harvested: Aug 26. Variety: King II.



58/Ba/2.3

Summary of Results

Mean yields per acre and responses in yield per cwt of N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O

	Rothamsted	Woburn	Rothamsted	Woburn
Sugar Beet, roots (washed): tons per acre			Barley, grain: cwt per acre	
Mean	14.24	8.77	24.5 <sup>‡</sup>	26.1 <sup>‡</sup>
Response to: N	+6.52	+4.22	+9.4	+4.0
P	+1.25	+7.69	-3.5	-7.9
K	-1.28	+1.02	+1.2	+3.3
Mean dry matter % as harvested:			78.9	81.1
Sugar Beet sugar percentage			Barley, straw: cwt per acre	
Mean	17.4	16.6	29.6 <sup>‡</sup>	32.3 <sup>‡</sup>
Response to: N	-0.4	+0.2	+6.6	+14.9
P	-1.0	+0.1	+11.5	+1.7
K	+0.2	+0.4	-0.6	+0.6
Mean dry matter % as harvested:			72.2	83.2
Sugar Beet, total sugar: cwt per acre			Clover, hay, dry matter: cwt per acre	
Mean	49.6	29.4	47.7	14.9
Response to: N	+21.3	+14.1	-7.0	+10.7
P	+1.5	+25.8	-5.9	+13.3
K	-3.6	+4.1	+1.2	-6.2
Mean dry matter % as cut:			60.2	17.9
Sugar Beet, tops: tons per acre			Wheat, grain: cwt per acre	
Mean	9.17	7.10	18.7 <sup>‡</sup>	20.6 <sup>‡</sup>
Response to: N	+3.27	+4.42	-6.7	+19.3
P	-0.24	+5.93	-3.4	+1.8
K	+0.80	-1.40	+2.6	+0.6
Mean dry matter % as harvested:			77.2	80.1
Sugar Beet, plant number: thousands per acre			Wheat, straw: cwt per acre	
Mean	31.1	‡‡‡	46.9 <sup>‡</sup>	28.4 <sup>‡</sup>
Response to: N	+0.4		+14.1	+31.0
P	-0.3		-7.9	+3.4
K	-1.0		+8.0	+0.1
Mean dry matter % as harvested:			75.5	82.4

<sup>‡</sup> (At 85% dry matter).      <sup>‡‡‡</sup> Not recorded.

58/Ba/2.4

Mean yields per acre and responses in yield per cwt of N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O

	Rothamsted	Woburn	Rothamsted	Woburn
	Potatoes, total tubers tons per acre		Rye, grain: cwt per acre	
Mean	7.75	6.48	23.2	25.2
Response to: N	+8.41	+4.04	+11.6	+14.4
P	+1.85	-2.91	-3.9	+3.3
K	+0.32	+3.23	+1.4	-0.6
Mean dry matter % as harvested:			81.2	80.4
	Potatoes, percentage ware		Rye, straw: cwt per acre	
	(1)	(2)		
Mean	87.2	75.0	41.5	34.1
Response to: N	+6.0	+0.2	+31.0	+19.8
P	-7.7	+10.0	-11.3	+6.4
K	+0.9	+5.8	+4.8	-3.3
Mean dry matter % as harvested:			83.4	82.3

\* (At 85% dry matter)

Riddle: (1) 1½"; (2) 1⅝"