

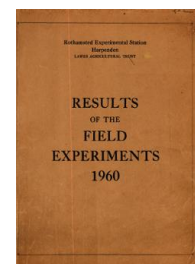
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# Yields of the Field Experiments 1960

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## 60/R/B/8 Concentrated Fertiliser Rotation

### Rothamsted Research

Rothamsted Research (1961) *60/R/B/8 Concentrated Fertiliser Rotation ; Yields Of The Field Experiments 1960*, pp 71 - 72 - DOI: <https://doi.org/10.23637/ERADOC-1-180>

60/B/8.1

### CONCENTRATED FERTILISER ROTATION

Concentrated compound fertiliser and forms of N - West Barnfield I  
1960.

Rotation: Kale, ryegrass, barley.

Design (each crop): 2 randomised blocks of 14 plots each.

Area of each plot (acres): 0.0174. Area harvested: Kale - 0.0086,  
Ryegrass - 0.0056, barley - 0.0116.

Treatments (per acre): No fertiliser. (O)  
P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O each at 0.3 cwt to barley and each at 0.1 cwt to kale  
and ryegrass, as triple superphosphate and potassium  
bicarbonate. (B)  
Compound fertiliser, 20% N, 10% P<sub>2</sub>O<sub>5</sub>, 10% K<sub>2</sub>O at 0.3(1),  
0.6(2) cwt N to barley and 1.0(1), 2.0(2) to kale and  
ryegrass. (F)  
Sulphate of ammonia, granular superphosphate and muriate  
of potash at rates equivalent to treatments F (1) and  
(2) (F)  
PK as treatment B plus (S)  
Sulphate of ammonia (C)  
Calcium nitrate (U)  
Urea (U)  
Ammonium nitrate (A)  
each at rates 1 and 2 of N.

Basal dressing: None.

Cultivations, etc.: Ploughed: Oct 30 - Nov 2, 1959. Fertilisers  
broadcast for barley, barley drilled at 2½ bushels per acre:  
Mar 26, 1960. Fertilisers broadcast for ryegrass: Mar 31.  
Ryegrass sown at 30 lb per acre; fertilisers applied for kale:  
Apr 1. Kale drilled at 3 lb per acre: Apr 8. Barley sprayed  
with CMPP at 6 pints in 40 gallons per acre: May 23. Grass cut:  
July 20. Barley combine harvested: Aug 17. Grass cut second  
time: Oct 3. Kale harvested: Nov 8 - 16. Varieties: Kale -  
Thousand head; ryegrass - S22; barley - Proctor. Previous crop:  
Oats.

Standard errors per plot.

Kale, fresh weight: 1.339 tons per acre or 6.0% (13 d.f.)  
Ryegrass dry matter:  
1st cut 2.59 cwt per acre or 9.2% (13 d.f.)  
2nd cut 1.95 cwt per acre or 15.9% (13 d.f.)  
Total of 2 cuts 3.31 cwt per acre or 8.2% (13 d.f.)  
Barley, grain (at 85% dry matter): 1.38 cwt per acre or 3.8%  
(13 d.f.)



60/B/8.2

Fertiliser	Summary of Results					
	Kale fresh weight tons per acre	Ryegrass dry matter cwt per acre			Barley (at 85% dry matter) cwt per acre	
		1st cut	2nd cut	Total of 2 cuts	Grain	Straw
	(±0.946)	(±1.83)	(±1.38)	(±2.34)	(±0.98)	
O	12.21	7.1	6.4	13.5	27.9	15.7
B	14.91	11.3	6.9	18.2	28.0	16.0
F <sub>1</sub>	22.18	30.8	9.5	40.3	34.8	21.8
F <sub>2</sub>	26.56	34.5	17.4	51.9	40.6	29.2
P <sub>1</sub>	22.44	27.7	9.5	37.2	35.3	20.5
P <sub>2</sub>	25.21	33.8	18.7	52.5	38.5	22.9
S <sub>1</sub>	21.58	25.2	9.5	34.7	37.1	25.2
S <sub>2</sub>	24.82	33.3	18.2	51.5	39.0	22.8
C <sub>1</sub>	23.71	30.7	8.3	39.0	35.1	22.8
C <sub>2</sub>	24.43	31.0	18.1	49.0	38.2	24.3
U <sub>1</sub>	21.45	27.2	8.1	35.3	34.1	21.2
U <sub>2</sub>	24.49	32.9	13.6	46.5	38.0	25.9
A <sub>1</sub>	22.04	32.5	10.3	42.8	35.1	23.4
A <sub>2</sub>	24.75	34.8	17.7	52.5	39.9	27.3
Mean	22.20	28.0	12.3	40.3	35.8	22.8
Mean dry matter % as harvested:		16.3	20.7	18.5	82.2	69.2

Treatments

- O = No fertiliser
- B = P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O each at 0.3 cwt to barley and each at 0.1 cwt to kale and ryegrass, as triple superphosphate and potassium bicarbonate
- F = Compound fertiliser, 20% N, 10% P<sub>2</sub>O<sub>5</sub>, 10% K<sub>2</sub>O at 0.3(1), 0.6(2) cwt N to barley and 1.0(1), 2.0(2) to kale and ryegrass.
- P = Sulphate of ammonia, granular superphosphate and muriate of potash at rates equivalent to treatments F (1) and (2).
- S = Sulphate of ammonia. Plus PK as treatment B
- C = Calcium nitrate. " " " "
- U = Urea. " " " "
- A = Ammonium nitrate. " " " "