

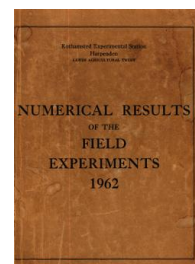
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62/R/B/7 Concentrated Fertilisers Rotation

Rothamsted Research

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62/B/7.1

CONCENTRATED FERTILISER ROTATION

Concentrated compound fertiliser and forms of N - West Barnfield I
1962, the third year.

Rotation: Kale, ryegrass, barley.

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

Area of each plot (acres): 0.0174. Area harvested: Kale - 0.0084,
ryegrass - 0.0056, barley - 0.0114.

Treatments (per acre): No fertiliser (O)
P₂O₅ and K₂O each at 0.3 cwt to barley and each at 1.0 cwt to
kale and ryegrass, as triple superphosphate and potassium
bicarbonate. (B)
Compound fertiliser, 20% N, 10% P₂O₅, 10% K₂O 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
Sulphate of ammonia (S)
Calcium nitrate (C)
Urea (U)
Ammonium nitrate (A)
each at rates 1 and 2 of N.

Basal dressing: None.

Cultivations, etc.: Ploughed: Dec 13, 1961. Fertilisers broadcast
for barley, barley drilled at 2½ bushels per acre: Feb 21, 1962.
Fertilisers broadcast for ryegrass, ryegrass sown at 30 lb per acre:
Apr 13. Fertilisers applied for kale: Apr 24. Kale drilled at
3 lb per acre: Apr 25. Barley sprayed with MCPA/TBA at 4 pints
in 40 gallons per acre: May 30. Grass cut twice: July 30 and
Oct 1. Barley combine harvested: Aug 27. Kale harvested:
Nov 6 and 15. Varieties: Kale - Thousand head (Canson);
ryegrass - S22; barley - Proctor.

Note: For previous year's results see "Results of the Field Experiments"
60/B/8 and 61/B/7.

Standard errors per plot.

Kale, fresh weight: 0.973 tons per acre or 4.6% (13 d.f.)

Ryegrass, dry matter:

1st cut: 2.53 cwt per acre or 11.3% (13 d.f.)

2nd cut: 2.71 cwt per acre or 13.6% (13 d.f.)

Total of 2 cuts: 3.06 cwt per acre or 7.2% (13 d.f.)

Barley, grain (at 85% dry matter): 1.86 cwt per acre or 6.0%
(13 d.f.)

62/B/7.2

Summary of Results

Fertiliser	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
	(±0.688)	(±1.79)	(±1.91)	(±2.16)	(±1.31)	
O	10.69	5.3	4.6	9.9	12.1	5.8
B	12.73	8.0	5.4	13.4	13.2	7.0
F ₁	21.82	21.7	19.3	41.0	31.3	20.1
F ₂	25.11	28.1	25.8	53.8	38.1	29.3
P ₁	21.08	20.2	20.9	41.1	30.6	20.6
P ₂	24.87	24.0	23.2	47.2	36.5	29.4
S ₁	17.95	24.7	15.5	40.2	27.1	18.1
S ₂	23.24	24.7	31.7	56.4	38.2	29.9
C ₁	20.75	23.2	18.3	41.5	30.7	22.3
C ₂	26.31	27.3	26.7	54.0	37.4	28.8
U ₁	21.10	23.7	17.3	41.0	27.7	19.1
U ₂	22.68	25.4	25.6	51.0	39.7	28.8
A ₁	20.74	27.0	18.7	45.7	30.3	20.9
A ₂	24.08	29.3	27.3	56.6	40.8	30.1
Mean	20.94	22.3	20.0	42.3	30.9	22.1
Mean dry matter % as harvested:		17.6	20.7	19.2	81.0	67.5

Treatments

- O = No fertiliser
 B = P₂O₅ and K₂O each at 0.3 cwt to barley and each at 1.0 cwt to kale and ryegrass, as triple superphosphate and potassium bicarbonate.
 F = Compound fertiliser, 20% N, 10% P₂O₅, 10% K₂O 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 " " " " "