

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1979

[Full Table of Content](#)



79/R/AG/6 Agdell - Ryegrass, Beans

Rothamsted Research

Rothamsted Research (1980) *79/R/AG/6 Agdell - Ryegrass, Beans* ; Yields Of The Field Experiments 1979, pp 25 - 27 - DOI: <https://doi.org/10.23637/ERADOC-1-45>

79/R/AG/6

AGDELL

Object: To study, by crop yields and soil analyses, the residual values of phosphate and potash applied in the period 1848-1951 and further dressings since 1964.

The tenth year of revised scheme, ryegrass and beans.

For previous yers see 'Details' 1967 and 1973, and 74-78/R/AG/6.

Treatments: All combinations of:-

Whole plots

1. OLDRES D Fertilisers and organic manures applied to roots every fourth year, in the period 1848-1948:

NONE	None
PKNAMG	P K Na Mg
NPKNAMGC	N P K Na Mg C

N: 48 kg N as sulphate of ammonia
P: 41 kg P as superphosphate
K: 224 kg K as sulphate of potash
Na: 16 kg Na as sulphate of soda
Mg: 11 kg Mg as sulphate of magnesia
C: Castor meal at 2240 kg supplying about 112 kg N

2. RN CROP Rotation 1848-1951 and crop:

F/BEANS	With fallow: Roots (turnips or swedes), barley, fallow, wheat 1848-1951. Beans (after grass/clover 1977 & 1978)
L/GRASS	With legume: Roots, barley, legume (clover or beans), wheat 1848-1951. Grass 1977-1979.

Half plots

3. 1964RES D Residues of 1964 treatments:

P
K

Quarter plots

4. PREVCROP Previous cropping 1958-69 on P-test half plots, 1958-70 on K-test half plots:

ARABLE	Arable or fallow
GRASS	Grass

79/R/AG/6

Sixteenth plots

5. P_2O_5 64 K_2O 64 Rates of 1964 treatments (kg):
 P_2O_5 to P-test K_2O to K-test
half plots half plots

0	0
500	315
1000	630
2000	1260

Thirty second plots

6. On P-test half plots:
To RN CROP F/BEANS. Residues of P_2O_5 applied 1970-72
(total, kg) and a fresh dressing in 1979 (kg):

P_2O_5 729
(0)0
(375)150

To RN CROP L/GRASS. Residues of P_2O_5 applied 1970-72
(total, kg):

P_2O_5 72
0
375

On K-test half plots:
To RN CROP F/BEANS. Residues of K_2O applied 1973-76
(total, kg) and a fresh dressing in 1979 (kg):

K_2O 769
(0)0
(870)300

To RN CROP L/GRASS. Residues of K_2O applied 1973-76
(total, kg):

K_2O 76
0
870

NOTE: L/GRASS plots were ploughed on 18 July. Yields were not taken.

Standard applications: Beans: Manures: P at 65 kg as superphosphate to K-test half plots. K at 250 kg as muriate of potash to P-test half plots.
Weedkiller: Trietazine with simazine (as 'Rental SC' at 2.8 kg) in 340 l.
Insecticide: Pirimicarb at 0.14 kg in 340 l applied twice.
Grass: Manures: 'Nitro-Chalk' at 380 kg. Weedkiller: Glyphosate at 1.5 kg in 220 l.

Seed: Minden, sown at 220 kg.

79/R/AG/6

Cultivations, etc.:- Beans: Basal P and K applied: 28 Nov, 1978. Test P and K applied: 7 Dec. Ploughed: 23 Jan, 1979. Rotary harrowed, seed sown: 23 Apr. Weedkiller applied: 13 May. Insecticide applied: 22 June and 12 July. Combine harvested: 14 Sept.
Grass: N applied: 7 Mar, 1979. Weedkiller applied: 12 June. Cut: 28 June.

BEANS

P - TEST PLOTS

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP	OLDRES D	NONE	PKNAMG		NPKNAMGC		
	P205 729 P205 64	(0)0	(375)150	(0)0	(375)150	(0)0	(375)150
ARABLE	0	2.06	2.55	3.36	3.22	2.63	3.03
	500	2.67	3.21	2.54	2.25	3.38	2.91
	1000	2.25	4.40	2.50	2.25	2.62	3.12
	2000	1.69	2.32	2.73	2.56	2.01	2.49
GRASS	0	1.69	2.67	2.17	1.66	1.69	2.09
	500	2.48	3.14	2.14	3.05	2.34	2.90
	1000	3.20	3.03	2.14	1.44	2.26	2.09
	2000	3.57	3.22	3.42	3.52	2.50	2.66

GRAIN MEAN DM% 86.7

PLOT AREA HARVESTED 0.00128

BEANS

K - TEST PLOTS

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP	OLDRES D	NONE	PKNAMG		NPKNAMGC		
	K20 769 K20 64	(0)0	(870)300	(0)0	(870)300	(0)0	(870)300
ARABLE	0	0.89	1.25	2.23	2.38	2.17	2.49
	315	1.16	0.99	2.31	2.55	3.28	2.48
	630	2.44	3.40	2.79	2.89	2.08	2.49
	1260	2.58	3.05	3.05	3.03	1.69	2.40
GRASS	0	1.52	2.16	1.58	3.11	2.01	2.10
	315	1.44	2.94	3.03	3.03	1.52	2.24
	630	2.48	2.94	2.23	2.91	1.93	3.15
	1260	1.78	2.29	2.86	2.92	1.93	2.58

GRAIN MEAN DM% 86.6

PLOT AREA HARVESTED 0.00128