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Yields of the Field Experiments 1981

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81/R/AG/6 Agdell - W. Beans, W. Wheat

Rothamsted Research

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81/R/PG/5

TOTAL OF 2 CUTS DRY MATTER TONNES/HECTARE

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

LIME	A	B	C	D	MEAN
MANURE					
N1	4.19	4.96	2.84	2.57	3.64
O(D)	4.62	5.25	4.43	3.60	4.48
O/PLOT3	3.78	4.89	2.50	2.97	3.54
P	4.97	5.76	4.34	4.14	4.80
N2P	5.14	5.76	5.17	5.04	5.28
N1MIN	8.69	8.52			8.61
MIN	8.11	8.46	5.01	3.84	6.36
PNAMG	4.45	4.51	4.60	4.45	4.51
N2MIN	8.50	8.73	6.40	5.94	7.39
N2PNAMG	5.31	5.22	5.03	4.29	4.96
N3MIN	8.07	7.19	7.32	6.41	7.25
N3MINSI	8.17	7.87	7.47	7.63	7.79
O/PLOT12	5.18	4.59	3.54	3.73	4.26
D/F	8.96	9.32	7.91	6.57	8.19
N2*MIN	7.08	7.99	8.23	7.84	7.78
MIN(N2*)	7.56	8.28	4.29	4.58	6.18
N1*MIN	7.88	7.83	7.11	6.37	7.30
N1*	5.07	5.53	6.17	3.90	5.17
N2KNAMGO			1.76	1.56	1.66
N2KNAMG2	4.70				4.70
N2KNAMG1	5.06	5.39			5.23
DO	8.03				8.03
D2	8.94				8.94
D1	7.96				7.96
D/N*PKO	7.51				7.51
D/N*PK2	8.39				8.39
D/N*PK1	7.84				7.84

TOTAL OF 2 CUTS MEAN DM% 26.2

81/R/AG/6

Sixteenth plots

5. P₂O₅ 64 K₂O 64

Rates of 1964 treatments (kg):

P ₂ O ₅ to P-test half plots	K ₂ O to K-test half plots
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0	0
500	315
1000	630
2000	1260

Thirty second plots

6.

On P-test half plots:

To RN CROP F/BEANS. Residues of P₂O₅ applied 1970-72 (total, kg) and fresh dressings in 1979 and 1981 (total, kg):

P₂O₅ 721

(0)0
(375)300

None

375 total in 1970-72, 150 in 1979, 150 in 1981

To RN CROP L/WHEAT. Residues of P₂O₅ applied 1970-72 (total, kg) and in 1980 (kg):

P₂O₅ 720

(0)0
(375)150

On K-test half plots:

To RN CROP F/BEANS. Residues of K₂O applied 1973-76 (total, kg) and fresh dressings in 1979 and 1981 (total, kg):

K₂O 761

(0)0
(870)600

None

870 total in 1973-76, 300 in 1979, 300 in 1981

To RN CROP L/WHEAT. Residues of K₂O applied 1973-76 (total, kg) and in 1980 (kg):

K₂O 760

(0)0
(870)300

NOTE: (1) Chalk was applied at 5.0 t on 6 Oct, 1980 to all plots of OLDRES D NPKNAMGC and to two of the half plots of OLDRES D PKNAMG - those with 1964RES D P on w. beans and K on w. wheat.

Standard applications:

W. wheat: Manures: 'Nitro-Chalk' at 580 kg. Weedkillers: Chlortoluron at 5.6 l in 250 l. Mecoprop at 3.0 l and isoproturon at 2.1 kg in 250 l. Fungicides: Prochloraz at 0.4 l with maneb at 1.2 kg and zineb at 0.13 kg in 250 l.

81/R/AG/6

W. beans: Weedkillers: Glyphosate at 1.5 kg in 900 l. Paraquat at 0.70 kg in 250 l. Trietazine at 1.2 kg with simazine at 0.17 kg in 250 l. Fungicide: Benomyl at 0.55 kg in 250 l applied twice, with the insecticide on the second occasion. Nematicide: Aldicarb at 4.0 kg, combine drilled. Insecticide: Pirimicarb at 0.14 kg.

Seed: W. wheat: Flanders, sown at 200 kg.
W. beans: Throws MS, sown at 180 kg.

Cultivations, etc.:-

W. wheat: Disc harrowed twice, seed sown: 8 Oct, 1980. Chlortoluron applied: 14 Oct. N applied: 10 Apr, 1981. Mecoprop and isoproturon applied: 21 Apr. Fungicides applied: 19 June. Combine harvested: 26 Aug.

W. beans: Glyphosate applied: 4 Sept, 1980. Paraquat applied: 26 Sept. Disc harrowed twice: 8 Oct. Seed sown: 1 Nov. Trietazine and simazine applied: 4 Nov. Fungicide applied: 27 Mar, 1981. Fungicide & insecticide applied: 12 June. Combine harvested: 1 Sept.

81/R/AG/6

BEANS P PLOTS

GRAIN TONNES/HECTARE

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

	OLDRES	NONE	PKNAMG		NPKNAMGC		
	P205 721	(0)0	(375)300	(0)0	(375)300	(0)0	(375)300
PREVCROP	P205 64						
ARABLE	0	2.18	2.72	3.14	2.15	2.36	1.55
	500	2.29	3.02	2.62	2.96	2.75	2.75
	1000	2.25	2.63	2.74	3.36	2.89	2.28
	2000	2.03	2.64	2.36	1.95	2.96	3.02
GRASS	0	2.04	2.72	1.95	2.35	2.49	2.69
	500	2.64	2.93	2.96	2.42	3.15	3.01
	1000	2.64	2.34	2.49	2.56	3.16	2.56
	2000	2.92	2.77	2.74	2.81	3.27	2.46

GRAIN MEAN DM% 85.7

BEANS K PLOTS

GRAIN TONNES/HECTARE

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

	OLDRES	NONE	PKNAMG		NPKNAMGC		
	K20 761	(0)0	(870)600	(0)0	(870)600	(0)0	(870)600
PREVCROP	K20 64						
ARABLE	0	1.80	2.19	3.17	2.41	2.28	2.56
	315	1.58	2.48	2.29	3.15	2.61	2.47
	630	2.42	3.03	3.22	2.48	2.76	2.29
	1260	2.42	2.18	2.62	3.48	3.02	2.29
GRASS	0	1.64	2.41	1.87	2.88	1.53	2.28
	315	1.96	2.71	2.08	2.55	1.67	2.62
	630	2.26	2.25	2.14	2.88	2.28	2.74
	1260	2.27	2.34	2.62	2.08	2.88	2.54

GRAIN MEAN DM% 85.6

PLOT AREA HARVESTED (OLDRES NONE) 0.00150

PLOT AREA HARVESTED (REMAINDER) 0.00134

81/R/AG/6

WHEAT P PLOTS

GRAIN TONNES/HECTARE

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

	OLDRES	NONE	PKNAMG		NPKNAMGC		
	P205 720	(0)0	(375)150	(0)0	(375)150	(0)0	(375)150
PREVCROP	P205 64						
ARABLE	0	6.52	7.11	5.75	6.46	4.57	3.66
	500	5.48	6.22	5.61	6.73	4.32	4.77
	1000	6.20	6.14	6.31	7.26	5.74	5.80
	2000	7.16	7.30	6.80	7.29	5.30	5.49
GRASS	0	4.67	7.06	4.76	6.93	1.64	4.14
	500	6.41	7.40	4.90	6.47	5.47	4.71
	1000	6.61	6.90	6.95	5.90	5.20	5.48
	2000	6.72	7.03	6.32	4.53	4.15	4.36

GRAIN MEAN DM% 84.6

SPRING WHEAT K PLOTS

GRAIN TONNES/HECTARE

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

	OLDRES	NONE	PKNAMG		NPKNAMGC		
	K20 760	(0)0	(870)300	(0)0	(870)300	(0)0	(870)300
PREVCROP	K20 64						
ARABLE	0	6.57	7.51	5.90	6.10	5.25	5.68
	315	5.37	5.51	5.84	6.25	5.03	5.63
	630	6.44	6.44	5.87	6.13	4.84	5.60
	1260	6.77	6.89	6.39	6.94	5.31	5.86
GRASS	0	4.99	6.58	3.65	5.32	2.48	4.50
	315	6.12	7.59	4.69	6.41	4.09	5.16
	630	5.64	7.09	4.93	5.61	4.38	5.70
	1260	6.94	7.50	5.32	5.74	4.32	4.93

GRAIN MEAN DM% 85.1

PLOT AREA HARVESTED (OLDRES NONE) 0.00128

PLOT AREA HARVESTED (REMAINDER) 0.00144