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Yields of the Field Experiments 1984

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84/R/AG/6 Agdell - W. Wheat

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84/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 15th year of revised scheme, w. wheat.

For previous years see 'Details' 1967 and 1973, and 74-83/R/AG/6.

Treatments: All combinations of:-

Whole plots

1. OLDRESD Fertilizers 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 in 1984:

F/WHEAT With fallow: Roots (turnips or swedes), s. barley, fallow, w. wheat 1848-1951. Wheat in 1984 (after fallow)

L/FALLOW With legume: Roots, s. barley, legume (clover or beans), w. wheat 1848-1951. Fallow in 1984.

Half plots

3. 1964RESD 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

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Sixteenth plots

5. P ₂ O ₅ 64	K ₂ O 64	Rates of 1964 treatments (kg):
		P ₂ O ₅ to P-test K ₂ O to K-test
		half plots half plots
0	0	
500	315	
1000	630	
2000	1260	

Thirty second plots

6.	To RN CROP F/WHEAT. Residues of P ₂ O ₅ applied 1970-72 (kg) and in 1979, 1981 and 1983 (kg):
P ₂ O ₅ 723	
(0)0	None
(375)450	375 total in 1970-72, 150 in 1980, 1981 and 1983
	To RN CROP F/WHEAT. Residues of K ₂ O applied 1973-76 (kg) and in 1979, 1981 and 1983 (kg):
K ₂ O 763	
(0)0	None
(870)900	870 total in 1973-76, 300 in 1980, 1982 and 1983

NOTE: Treatment combinations to thirty second plots of L/FALLOW plots are not shown above.

Standard applications:

W. wheat: Manures: 'Nitro-Chalk' at 130 kg followed by 750 kg.
 Weedkillers: Chlortoluron at 3.5 l in 250 l. Mecoprop at 2.0 kg with
 ioxynil at 0.25 kg and bromoxynil at 0.25 kg in 200 l. Fungicides:
 Prochloraz at 0.40 kg and carbendazim at 0.15 kg in 200 l.
 Triadimefon at 0.12 kg with captafol at 1.3 kg in 500 l.
 Insecticide: Pirimicarb at 0.14 kg in 250 l.

Seed: Avalon, dressed chlorfenvinphos, sown at 200 kg.

Cultivations, etc.:-

W. wheat: Heavy spring-tine cultivated: 27 Sept, 1983. Rotary harrowed,
 seed sown: 28 Sept. Chlortoluron applied: 29 Sept. First N applied:
 16 Feb, 1984. Second N applied: 9 Apr. Prochloraz and carbendazim
 applied: 14 Apr. Mecoprop, ioxynil and bromoxynil applied: 19 Apr.
 Triadimefon and captafol applied: 13 June. Insecticide applied:
 27 June. Combine harvested: 15-17 Aug.

Fallow: Ploughed: 29 Nov, 1983. Heavy spring-tine cultivated: 20 Mar,
 1984, 27 Apr, 9 May. Spring-tine cultivated: 20 June. Rotary
 cultivated: 12 July.

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WHEAT P PLOTS

GRAIN TONNES/HECTARE

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

PREVCROP	OLDRESD	NONE	(375)450	PKNAMG	(375)450	NPKNAMGC	(375)450
	P205 723	(0)0		(0)0		(0)0	
ARABLE	P205 64						
	0	7.25	8.78	9.47	9.90	7.85	6.74
	500	7.90	9.19	9.80	10.39	8.25	8.29
	1000	8.83	9.87	9.78	10.44	8.53	9.31
GRASS	2000	8.76	9.06	10.32	10.32	9.21	9.71
	0	6.46	9.54	6.26	9.17	7.77	9.15
	500	7.64	8.61	9.42	10.66	6.66	8.15
	1000	8.30	9.57	9.03	9.99	7.40	8.88
	2000	8.79	9.61	10.62	10.72	6.85	8.23

GRAIN MEAN DM% 82.6

PLOT AREA HARVESTED 0.00140

WHEAT K PLOTS

GRAIN TONNES/HECTARE

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

PREVCROP	OLDRESD	NONE	(870)900	PKNAMG	(870)900	NPKNAMGC	(870)900
	K20 763	(0)0		(0)0		(0)0	
ARABLE	K20 64						
	0	9.60	9.19	10.73	10.39	10.42	10.28
	315	8.99	9.74	10.84	10.88	10.93	10.63
	630	8.94	10.03	10.53	10.17	10.42	10.28
GRASS	1260	9.26	9.24	10.94	10.51	10.38	9.79
	0	9.49	9.90	10.66	11.09	10.15	10.39
	315	9.44	9.71	10.99	10.72	10.55	11.03
	630	9.83	9.39	10.98	10.95	9.97	10.14
	1260	9.28	9.78	10.88	10.81	9.76	9.90

GRAIN MEAN DM% 82.7

PLOT AREA HARVESTED 0.00140