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Yields of the Field Experiments 1974



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74/R/CS/24 P K and Take-all - Wheat

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74/R/CS/24

PK AND TAKE-ALL

Object: To study the effects of different amounts of phosphate, and potash fertiliser on the yields and incidence of take-all (Geeumannomyces graminis) in winter wheat after continuous barley - West Barnfield II.

Sponsors: G.E.G. Mattingly, D.B. Slope.

The seventh year, winter wheat (after continuous barley 1968-73).

For previous years see 68/C/16(t), 69/R/CS/24, 70/R/CS/24(t) and 71-73/R/CS/24.

Design: 4 randomised blocks of 10 plots split into 2.

Whole plot dimensions: 5.33 x 20.1. Sub-plot area harvested: 0.00265.

Treatments: All combinations of:-

Whole plots: 1. Phosphate (kg P) as superphosphate: P

No:	ne					0	
15	annually					15	A
60	annually					60	A
90	six-yearly.	last	applied	autumn	1973	90	S
360	six-yearly.	last	applied	autumn	1973	360	S

Potassium (kg K) annually as muriate of potash:

> 30 120 30

Sub plots: 3. Residues of nitrogen fertiliser applied annually 1970-73 (kg N) as 'Nitro-Chalk':

N RESID

K

(37.5)	(37.5)
(75.0)	(75.0)
(113)	(113)
(150)	(150)

Basal applications: Manures: 'Nitro-Chalk' at 500 kg. Weedkillers: Ardnotriazole ('Weedazol' at 22.5 l in 220 l), and Dicamba with mecoprop and MCPA ('Banlene Plus' at 5.6 l in 370 l).

Seed: Cappelle, sown at 200 kg.

74/R/CS/24

Cultivations, etc.:- Six-yearly dressing of P applied: 10 Sept, 1973.

Aminotriazole applied: 12 Sept. Ploughed: 10 Oct. Spring-tine
cultivated and annual P and K applied: 15 Oct. Power harrowed: 20 Oct.
Seed sown: 22 Oct. N applied: 16 Apr, 1974. 'Banlene Plus'
applied: 7 May. Combine harvested: 30 Aug.

NOTE: Samples were taken in May and July for estimation of root-rotting diseases. Soil samples were taken in autumn for P and K analyses.

Standard error per plot.
Grain, tonnes/hectare: 0.558 or 9.0% (37 d.f.)

	11	BLES OF ME	CHANG			
	GRAIN	: TONNES/	HECTARE			
	0	15 A	60 A	90 S	360 s	Mean
К						
30 120	4.90 5.28	5.96 6.11	6.34 6.75	6.28 6.92	6.47 6.99	5.99 6.41
N RESID		•				
(37.5) (75.0) (113) (150)	5.44 4.45 5.93 4.54	5.47 5.86 6.39 6.43	6.26 6.27 6.61 7.03	6.70 6.62 6.80 6.28	6.64 6.59 6.93 6.77	6.10 5.96 6.53 6.21
Mean	5.09	6.04	6.54	6.60	6.73	6.20
	236.5	N R	ESID			
	(37.5)	(75.0)	(113)	(150)		
К						
30 120	5.69 6.52	5.95 5.97	6.13 6.94	6.19 6.22		
STANDARD ERRORS	OF DIFFERENCE	S				
K N RESID	P N F	K ESID	K N RES	ID K PNRESID F)	

Tht/Pi/CS/24 TOWNES/HEDTARE 1200 15 A GO A 90 S 360 S N FRESTID 15 A GO A 90 S 360 S N FRESTID 15 A GO A 90 S 360 S N FRESTID 1, 80 5.31 6.07 6.23 6.54 3.95 6.04 6.60 6.04 6.60 6.04 6.05 6.04 6.04 6.05 6.04 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.04 6.05 6.04 6.05 6.04 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.04 6.05 6.04 6.05 6.04 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.05 6.04 6.04 6.05 6.04 6.04 6.04 6.04 6.04 6.04 6.04 6.04										
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74/R/CS/24 GRAIN: TONNES/HECTARE 30 15 A 60 A 90 S 360 S 0 5.89 6.02 6.08 5.89 6.63 6.98 5.56 6.90 5.89 6.63 4.10			120	60 A	6.46 6.60 6.80 7.15					
30 5.5.68 5.5.88 5.5.95 6.97 6.98 6.98 6.99 6.99 7.95 6.99 7.95 6.99		ij			5.62 6.04 6.19 6.29					
30 A 80 A 80 A 80 S. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.	गुठ/ठ	S/HECTAR		0	6.08					
30 5.5.88 5.5.88 5.5.95 6.95 6.97 6.98 6.98 6.98 6.98 6.98 6.97 6.98 6.98 6.98 6.98 6.98 6.98 6.98 6.98	74/4/	N: TONNE	-		6.63					
75.05.08.33 75.05.08.33 75.05.08.33		GRAI			6.23 6.35 5.89					
N RESID (37.5) (75.0) (113) (150) (8	60 A	6.83					
N RESID (37.5) 4.80 (75.0) 4.95 (113) 4.99 (150) 4.98 Mean D.M. \$ 83				15 A	5.33 6.29 6.76	0.				
N RESII (75.0) (150) (150) Mean D.			_	0		M. % 83				
			M	д	N RESII (37.5) (75.0) (113) (150)	Mean D.				

		74/R/CS/2	4			
	SIRAW	: TONNES/H	ECTARE			
	0	15 A	60 A	90 S	360 s	Mean
К						
30 120	3.99 4.73	4.23 4.91	4.11 4.95	4.28 5.09	4.43 4.65	4.21 4.87
N RESID						- 5
(37.5)	4.14	4.57 4.30	4.32 4.51	4.82 4.64	4.44	4.46
(75.0) (113) (150)	4.95 3.96	4.68 4.72	4.45	4.76 4.52	4.70	4.71 4.56
Mean	4.36	4.57	4.53	4.69	4.54	4.54
		N RE	SID			
	(37.5)	(75.0)	(113)	(150)		
К						
30 120	4.07 4.84	4.00 4.85	4.48	4.29 4.83		

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