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80/W/RN/14 Long Term Phosphate

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80/W/RN/14

LONG TERM PHOSPHATE

Object: To study the residual effects of superphosphate on a clover/grass ley - Woburn Stackyard III.

Sponsor: G.E.G. Mattingly.

The 13th year, clover/grass ley.

For previous years see 68/B/8(t), 69/W/RN/14, 70/W/RN/14(t), 71/W/RN/14(t), 72/W/RN/14(t) and 73-79/W/RN/14.

Design: 6 blocks of 6 plots, split into 2.

Whole plot dimensions: 8.53 x 15.8.

Treatments: All combinations of:-

Whole plots

1. P205RES(73) Residues of superphosphate applied autumn 1967 and spring 1973 (kg P205):

	1967	1973	Total
0	None	None	None (Duplicate plots)
360	188	172	360
720	376	344	720
1440	753	687	1440
2160	1130	1030	2160

Sub plots

2. P205 80 Superphosphate in 1980 in addition to residues, applied in three equal dressings 1970-72, (kg P205):

0(0)	None
57(376)	57 in 1980, 376 total applied 1970-72.

Basal applications: Manures: Chalk at 2.5 t. K₂O at 240 kg as muriate of potash. MgO at 30 kg as Kieserite in winter. (25:0:16) at 370 kg in spring and after the second cut.

Cultivations, etc.: - Chalk applied: 13 Nov, 1979. K applied: 14 Jan, 1980. Mg and NK applied: 11 Mar. P treatments applied: 13 Mar. Cut: 9 June, 10 July, 12 Sept. NK applied: 21 July.

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1ST CUT(9/6/80) DRY MATTER TONNES/HECTARE

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

P205RES(73)	0	360	720	1440	2160	MEAN
P205 80						
0(0)	4.80	5.13	4.96	5.48	4.92	5.02
57(376)	4.96	5.11	5.19	5.46	4.58	5.04
MEAN	4.88	5.12	5.07	5.47	4.75	5.03

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	P205RES(73)	P205 80	P205RES(73) P205 80	
SED	0.300		0.339	MIN REP
	0.260	0.092	0.294	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
P205RES(73)			0.224	MIN REP
			0.159	MAX REP

P205RES(73)
 MAX REP 0
 MAX-MIN 0 V ANY OF THE REMAINDER
 MIN REP ANY OF THE REMAINDER

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	26	0.519	10.3
BLOCK.WP.SP	31	0.388	7.7

1ST CUT MEAN DM% 30.5

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2ND CUT (10/7/80) DRY MATTER TONNES/HECTARE

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

P205RES(73)	0	360	720	1440	2160	MEAN
P205 80						
0(0)	1.46	1.40	1.48	1.41	1.42	1.44
57(376)	1.47	1.45	1.34	1.33	1.68	1.46
MEAN	1.46	1.42	1.41	1.37	1.55	1.45

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	P205RES(73)	P205 80	P205RES(73) P205 80	
SED	0.118		0.152	MIN REP
	0.102	0.055	0.131	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
P205RES(73)			0.136	MIN REP
			0.096	MAX REP

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	26	0.204	14.1
BLOCK.WP.SP	31	0.235	16.3

2ND CUT MEAN DM% 20.6

3RD CUT (12/9/80) DRY MATTER TONNES/HECTARE

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

P205RES(73)	0	360	720	1440	2160	MEAN
P205 80						
0(0)	3.36	3.22	3.32	3.16	3.60	3.34
57(376)	3.19	3.34	3.38	3.60	3.33	3.34
MEAN	3.28	3.28	3.35	3.38	3.47	3.34

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	P205RES(73)	P205 80	P205RES(73) P205 80	
SED	0.164		0.204	MIN REP
	0.142	0.070	0.177	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
P205RES(73)			0.172	MIN REP
			0.122	MAX REP

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	26	0.283	8.5
BLOCK.WP.SP	31	0.299	8.9

3RD CUT MEAN DM% 22.1

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TOTAL OF 3 CUTS DRY MATTER TONNES/HECTARE

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

P205RES(73)	0	360	720	1440	2160	MEAN
P205 80						
0(0)	9.62	9.75	9.76	10.05	9.94	9.79
57(376)	9.63	9.89	9.91	10.39	9.59	9.84
MEAN	9.62	9.82	9.84	10.22	9.77	9.81

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	P205RES(73)	P205 80	P205RES(73) P205 80	
SED	0.295		0.350	MIN REP
	0.256	0.108	0.303	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
P205RES(73)			0.265	MIN REP
			0.187	MAX REP

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	26	0.511	5.2
BLOCK.WP.SP	31	0.459	4.7

TOTAL OF 3 CUTS MEAN DM% 24.4

PLOT AREA HARVESTED 0.00145