

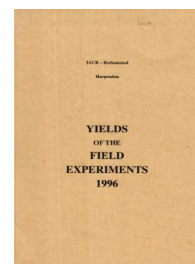
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED  
RESEARCH

## Yields of the Field Experiments 1996

[Full Table of Content](#)



---

### 96/R/BN/7 Barnfield - Ley

#### Rothamsted Research

Rothamsted Research (1997) *96/R/BN/7 Barnfield - Ley* ; Yields Of The Field Experiments 1996, pp 33 - 36 - DOI: <https://doi.org/10.23637/ERADOC-1-51>

96/R/BN/7

**BARNFIELD**

**Object:** The experiment was designed to study the effects of organic and inorganic manures on continuous root crops. It was progressively modified to study effects on other crops.

Sections 1 and 2, 2nd year of clover. Sections 3-6, 2nd year of grass/clover.

For previous years see 'Details' 1967 and 1973 and 74-95/R/BN/7.

**Plot dimensions:** 10.7 x 55.9.

Treatments to grass/clover, Sections 3-6: All combinations of:-

Whole plots

1. **MANURE** Fertilizers and organic manures:

(D)	(D)
(D) PK	(D) P K
PKMG	P K (Na) Mg
P	P
PK	P K
PMG	P (Na) Mg
0	0

P: 35 kg P as triple superphosphate in 1974 and since 1987, single superphosphate in other years

K: 225 kg K as sulphate of potash

(Na): 90 kg Na as sodium chloride until 1973, none since

Mg: 90 kg Mg as kieserite every fourth year since 1974 (sulphate of magnesia until 1973)

(D): Farmyard manure at 35 t until 1975, none since

Sub-plots

2. **N PERCUT** Nitrogen fertilizer in 1996 (kg N per cut) as 34.5% N, cumulative to previous dressings and residues of forms of N previously each supplying 96 kg N per annum:

75	75, previously nitrate of soda, section 3
100	100, previously sulphate of ammonia, section 4
125	125, previously sulphate of ammonia + castor meal, section 5
150	150, previously castor meal, section 6

No nitrogen fertilizer applied in 1995. Castor meal last applied 1961, nitrate of soda and sulphate of ammonia until 1959.

Plus one plot **MANURE KMG 100**

96/R/BN/7

Treatments to clover, sections 1 and 2 (not given nitrogen fertilizer):

**MANURE** Fertilizers and organic manures as for grass/clover above, excluding KMG.

- NOTES:** (1) P, K and D treatments were applied to Sections 1 and 2 until 1980. None were applied subsequently until the resumption of P and K treatments only, from 1985.  
 (2) Yields were not taken from section 2.

**Experimental diary:**

- 08-Nov-95 : **T** : P and K applied.  
 27-Mar-96 : **T** : N applied  
 25-Apr-96 : **B** : Rolled.  
 10-Jun-96 : **T** : Cut, herbage removed.  
 11-Jun-96 : **T** : N applied.  
 11-Nov-96 : **T** : Cut, herbage removed.

**NOTE:** Herbage samples were taken for chemical analysis.

**GRASS/CLOVER**

**1ST CUT (10/6/96) DRY MATTER TONNES/HECTARE**

\*\*\*\*\* Tables of means \*\*\*\*\*

N PERCUT	75	100	125	150	Mean
<b>MANURE</b>					
D	5.35	6.43	6.49	5.86	6.03
DPK	6.12	6.18	6.63	6.76	6.43
PKMG	5.43	5.52	5.54	5.67	5.54
P	4.30	4.06	4.41	4.54	4.33
PK	4.60	5.61	5.77	5.70	5.42
PMG	3.57	3.73	3.72	3.23	3.56
0	3.29	4.01	3.33	2.67	3.33
Mean	4.67	5.08	5.13	4.92	4.95

**MANURE KMG 100** 5.62

Grand mean 4.97

1ST CUT MEAN DM% 23.0

96/R/BN/7

GRASS/CLOVER

2ND CUT (11/11/96) DRY MATTER TONNES/HECTARE

\*\*\*\*\* Tables of means \*\*\*\*\*

N PERCUT MANURE	75	100	125	150	Mean
D	1.26	2.31	2.54	3.21	2.33
DPK	2.03	2.80	2.35	3.36	2.63
PKMG	1.57	2.53	2.71	3.10	2.48
P	1.10	1.60	2.58	1.33	1.65
PK	1.29	2.22	2.69	3.50	2.42
PMG	1.06	0.95	1.79	0.75	1.14
0	0.70	0.64	0.58	0.55	0.62
Mean	1.29	1.86	2.18	2.26	1.90

MANURE KMG 100 2.46

Grand mean 1.92

2ND CUT MEAN DM% 22.2

TOTAL OF 2 CUTS DRY MATTER TONNES/HECTARE

\*\*\*\*\* Tables of means \*\*\*\*\*

N PERCUT MANURE	75	100	125	150	Mean
D	6.61	8.73	9.03	9.07	8.36
DPK	8.15	8.98	8.98	10.12	9.06
PKMG	7.00	8.05	8.25	8.77	8.02
P	5.40	5.66	6.99	5.87	5.98
PK	5.89	7.82	8.46	9.20	7.84
PMG	4.63	4.68	5.52	3.98	4.70
0	3.99	4.65	3.91	3.22	3.94
Mean	5.95	6.94	7.31	7.18	6.84

MANURE KMG 100 8.08

Grand mean 6.89

TOTAL OF 2 CUTS MEAN DM% 22.6

PLOT AREA HARVESTED 0.00155

96/R/BN/7

CLOVER

1ST CUT (10/6/96) DRY MATTER TONNES/HECTARE

\*\*\*\*\* Tables of means \*\*\*\*\*

MANURE	D	DPK	PKMG	P	PK	PMG	0	Mean
	3.54	3.43	2.92	2.69	3.21	3.48	2.23	3.07

1ST CUT MEAN DM% 19.5

2ND CUT (11/11/96) DRY MATTER TONNES/HECTARE

\*\*\*\*\* Tables of means \*\*\*\*\*

MANURE	D	DPK	PKMG	P	PK	PMG	0	Mean
	0.82	1.13	0.76	0.38	1.13	0.55	0.46	0.75

2ND CUT MEAN DM% 17.4

TOTAL OF 2 CUTS DRY MATTER TONNES/HECTARE

\*\*\*\*\* Tables of means \*\*\*\*\*

MANURE	D	DPK	PKMG	P	PK	PMG	0	Mean
	4.36	4.56	3.67	3.08	4.34	4.03	2.69	3.82

TOTAL OF 2 CUTS MEAN DM% 18.5

PLOT AREA HARVESTED 0.00155