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## Yields of the Field Experiments 2000

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### 00/R/BN/7 Barnfield - Grass, Grass With Clover

#### Rothamsted Research

Rothamsted Research (2001) *00/R/BN/7 Barnfield - Grass, Grass With Clover* ; Yields Of The Field Experiments 2000, pp 30 - 32 - DOI: <https://doi.org/10.23637/ERADOC-1-55>

00/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.

The 158th year, grass and grass with clover

For previous years see 'Details' 1967 and 1973 and 74-99/R/BN/7.

**Plot dimensions:** 10.7 x 55.9.

## Treatments:

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 (applied at 77 kg in 1990, 1994 and 1998) (sulphate of magnesia until 1973)
- (D): Farmyard manure at 35 t until 1975, none since

Sub-plots

## 2. N PERCUT Nitrogen fertilizer in 2000 (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 1971, nitrate of soda and sulphate of ammonia until 1959.

Plus one plot **MANURE** KMG 100

00/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.  
(3) Only one cut was taken in 2000 prior to ploughing and re-drilling.

**Experimental diary:**

22-Dec-99 : **T** : P and K applied.  
14-Mar-00 : **T** : N applied.  
23-May-00 : **B** : Cut, herbage removed.  
04-Jun-00 : **B** : Topped  
05-Jun-00 : **B** : Baled.  
28-Jun-00 : **B** : Azural at 4.0 l in 200 l.  
13-Jul-00 : **T** : Topped sections 1 and 2.

**NOTE:** Samples of grass and grass/clover were taken for chemical analysis.

00/R/BN/7

# GRASS

## 1ST AND ONLY CUT (23/5/00) DRY MATTER TONNES/HECTARE

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

| N PERCUT<br>MANURE | 75   | 100  | 125  | 150  | Mean |
|--------------------|------|------|------|------|------|
| (D)                | 3.63 | 3.36 | 3.01 | 4.00 | 3.50 |
| (D) PK             | 4.56 | 5.12 | 4.79 | 5.16 | 4.91 |
| PKMG               | 3.73 | 4.19 | 4.87 | 4.78 | 4.39 |
| P                  | 3.18 | 2.54 | 2.96 | 3.61 | 3.08 |
| PK                 | 3.51 | 4.33 | 5.03 | 4.15 | 4.26 |
| PMG                | 2.84 | 2.43 | 1.85 | 1.56 | 2.17 |
| 0                  | 1.93 | 2.08 | 2.62 | 2.08 | 2.18 |
| Mean               | 3.34 | 3.43 | 3.59 | 3.62 | 3.50 |

MANURE KMG 100 2.01

Grand mean 3.45

1ST CUT MEAN DM% 15.8

# GRASS/CLOVER

## 1ST AND ONLY CUT (23/5/00) DRY MATTER TONNES/HECTARE

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

| MANURE | (D)  | (D) PK | PKMG | P    | PK   | PMG  | 0    | Mean |
|--------|------|--------|------|------|------|------|------|------|
|        | 2.81 | 2.68   | 2.63 | 2.02 | 2.90 | 2.06 | 1.95 | 2.44 |

1ST CUT MEAN DM% 13.7

PLOT AREA HARVESTED 0.00155