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Yields of the Field Experiments 1974

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74/R/CS/130 Effects of Earthworm Inoculation - New Grass

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74/R/CS/130

EFFECTS OF EARTHWORM INOCULATION

Object: To study the effects of different species of earthworms on yield and other characteristics of new grass - Fosters O & E.

Sponsor: J.R. Lofty.

The 1st year, ley.

Design: 3 blocks of 4 plots.

Whole plot dimensions: 8.53 x 9.14. Area harvested: 0.00046.

Treatments: Inoculation with earthworm species:	WORMSPEC
None	None
Allolobophora longa at 15 per square metre	Allolobo
Lumbricus terrestris at 5 per square metre	Lumbricu
Six species - A.caliginosa, A.chlorotica, A.longa, A.rosea, L.rubellus, L.terrestris at a total of 35 per square metre	SixSpec

NOTES: (1) Earthworms were applied in late May, 1974. It was intended to repeat the applications in November but this was postponed until 1975 because of prevailing weather conditions.

(2) The site had been fallowed continuously since 1960.

Basal applications: Manures: (10:24:24) at 310 kg in seedbed. (25:0:16) at 440 kg for the first cut and at 220 kg for the second and third cuts.

Seed: 8.0 kg Perennial Ryegrass Combi, 5.3 kg Perennial Ryegrass S23, 8.0 kg Perennial Ryegrass S24, 6.7 kg Cocksfoot S26, 6.7 kg Cocksfoot S37, 2.7 kg Timothy S48, 2.7 kg Timothy S51, 2.0 kg New Zealand White Clover Huia, 0.7 kg Old Pasture Wild White Clover. Sown at 42.6 kg.

Cultivations, etc.: - NPK applied: 21 Aug, 1973. Rotary harrowed: 28 Aug. Seed sown: 30 Aug. NK applied: 25 Mar, 1974, 3 June, 31 July. Cut: 31 May, 30 July, 17 Dec.

Standard errors per plot. Dry matter: tonnes/hectare.

1st cut:	0.185 or 2.5% (6 d.f.)
2nd cut:	0.503 or 12.6% (6 d.f.)
3rd cut:	0.281 or 11.3% (6 d.f.)
Total of 3 cuts:	0.663 or 4.8% (6 d.f.)

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TABLES OF MEANS

DRY MATTER: TONNES/HECTARE

WORMSPEC

None	Allolobo	Lumbricu	SixSpec	Mean
1ST CUT				
7.99	7.55	7.44	6.89	7.47
2ND CUT				
4.16	3.77	4.21	3.86	4.00
3RD CUT				
2.66	2.56	2.42	2.31	2.49
TOTAL OF 3 CUTS				
14.81	13.88	14.06	13.05	13.95

STANDARD ERRORS OF DIFFERENCES

Mean D.M. %

WORMSPEC

1st cut	0.151	24.1
2nd cut	0.411	29.5
3rd cut	0.230	36.0
Total of 3 cuts	0.541	29.9