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85/R/CS/247 Organic Matter and Earthworm Inoculation - S. Barley

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85/R/CS/247

ORGANIC MATTER AND EARTHWORM INOCULATION

Object: To study methods of inoculating earthworms into arable soil and the influence of organic materials on subsequent multiplication and spread - Hoosfield.

Sponsor: C.A. Edwards.

The sixth year, s. barley.

For previous years see 80-84/R/CS/247.

Design: 3 randomised blocks of 9 plots.

Whole plot dimensions: 7.85 x 7.62.

Treatments: All combinations of:-

1. WORMINOC(80) Earthworms and inoculation method for 1980 crop only:

NONE	None
EVEN	Earthworms (<i>Lumbricus terrestris</i>) applied at 16,700 per hectare in November 1979:
CONC	Evenly spaced throughout
	Concentrated in metre squares, 100 earthworms per square metre

2. ORG MATT Forms of organic matter:

NONE	None
STR	Straw at 6.50 t for 1980, 3.25 t for 1981 and 1982
STR+FYM	Straw at 6.50 t for 1980, 3.25 for 1981 and 1982 plus farmyard manure at 40 t for each year including 1985

Basal applications: Manures: (20:10:10) at 630 kg. Weedkillers: Paraquat at 0.60 kg ion in 500 l. Clopyralid at 0.05 kg and bromoxynil at 0.24 kg with mecoprop at 1.7 kg applied with the fungicide in 500 l. Fungicide: Tridemorph at 0.52 kg.

Seed: Triumph, dressed triadimenol and fuberidazole, sown at 160 kg.

Cultivations, etc.: - Paraquat applied: 20 Nov, 1984. Cultivated by rotary grubber: 1 Feb, 1985. FYM treatments applied: 5 Feb. Spring-tine cultivated twice, NPK applied, seed sown: 15 Mar. Remaining weedkillers applied with the fungicide: 9 May. Combine harvested: 22 Aug.

85/R/CS/247

GRAIN TONNES/HECTARE

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

ORG MATT WORMINOC(80)	NONE	STR	STR+FYM	MEAN
NONE	5.99	5.72	6.13	5.95
EVEN	6.02	6.39	6.21	6.21
CONC	6.28	6.29	6.28	6.28
MEAN	6.10	6.13	6.21	6.15

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

TABLE	WORMINOC(80)	ORG MATT	WORMINOC(80) ORG MATT
SED	0.218	0.218	0.378

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.463	7.5

GRAIN MEAN DM% 80.3

PLOT AREA HARVESTED 0.00244