

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 1981

[Full Table of Content](#)



## 81/R/CS/247 Organic Matter and Earthworm Inoculation - W. Wheat

### Rothamsted Research

Rothamsted Research (1982) *81/R/CS/247 Organic Matter and Earthworm Inoculation - W. Wheat* ; Yields Of The Field Experiments 1981, pp 189 - 190 - DOI:

<https://doi.org/10.23637/ERADOC-1-35>

81/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 second year, w. wheat.

For previous year see 80/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 (81) Forms of organic matter, cumulative for 1980 & 1981 crops:

|         |   |
|---------|---|
| NONE    | None  |
| STR     | Straw at 6.50 t for 1980, 3.25 t for 1981.  |
| STR+FYM | Straw at 6.50 t for 1980, 3.25 t for 1981 plus farmyard manure at 40 t for both years |

Basal applications: Manures: Chalk at 7.5 t. (10:23:23) at 250 kg, combine drilled. 'Nitro-Chalk' at 560 kg. Weedkillers: Paraquat at 0.84 kg ion in 250 l, applied twice. Isoproturon at 2.1 l with mecoprop at 3.2 l in 250 l. Fungicides: Prochloraz at 0.4 l in 250 l applied with maneb at 1.2 kg and zineb at 0.13 kg.

Seed: Flanders, sown at 180 kg.

Cultivations, etc.: - Paraquat applied: 1 Sept, 1980. Chalk applied: 2 Sept. Paraquat applied: 30 Sept. Seed sown: 7 Oct. Test FYM and straw applied: 11 Nov. N applied: 15 Apr, 1981. Isoproturon and mecoprop applied: 22 Apr. Fungicides applied: 22 June. Combine harvested: 24 Aug.

NOTE: Plots were sampled for earthworms in November.

81/R/CS/247

GRAIN TONNES/HECTARE

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

| ORG MATT(81)<br>WORMINOC(80) | NONE | STR  | STR+FYM | MEAN |
|------------------------------|------|------|---------|------|
| NONE                         | 6.38 | 6.36 | 6.11    | 6.28 |
| EVEN                         | 6.57 | 5.82 | 6.14    | 6.18 |
| CONC                         | 6.44 | 6.07 | 6.16    | 6.22 |
| MEAN                         | 6.46 | 6.08 | 6.14    | 6.23 |

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

| TABLE | WORMINOC(80) | ORG MATT(81) | WORMINOC(80)<br>ORG MATT(81) |
|-------|--------------|--------------|------------------------------|
| SED   | 0.170        | 0.170        | 0.295                        |

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

| STRATUM  | DF | SE    | CV% |
|----------|----|-------|-----|
| BLOCK.WP | 16 | 0.361 | 5.8 |

GRAIN MEAN DM% 81.1

PLOT AREA HARVESTED 0.00244