

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 1990

[Full Table of Content](#)



90/R/RA/7 Bacterial Inoculants - W. Oilseed Rape

Rothamsted Research

Rothamsted Research (1991) *90/R/RA/7 Bacterial Inoculants - W. Oilseed Rape* ; Yields Of The Field Experiments 1990, pp 135 - 137 - DOI: <https://doi.org/10.23637/ERADOC-1-42>

90/R/RA/7

WINTER OILSEED RAPE

BACTERIAL INOCULANTS

Object: To study the effects of two bacterial inoculants on the growth and yield of w. oilseed rape - Little Hoos.

Sponsors: J. Tann, J.M. Day, P.H. Williams, I.J. Webster.

Design: 4 randomised blocks of 10 plots.

Whole plot dimensions: 4.0 x 10.0.

Treatments: All combinations of:-

- | | |
|---------------------|-----------------------------------|
| 1. INOCULANT | Bacterial inoculants: |
| B SUBT 1 | Bacillus subtilis, strain 1 |
| B SUBT 2 | " " " 2 |
| 2. FORMULAT | Formulations: |
| BROTH | Liquid broth to seed |
| SLURRY | Slurry, pre-coated to seed |
| 3. SEEDRESS | Seed dressings: |
| NONE | None |
| FE+LI+TH | Fenpropimorph, lindane and thiram |

plus two extra treatments:

EXTRA

- | | |
|---------|--|
| BO SO | No bacterial inoculant, no seed dressing |
| BO SFLT | No bacterial inoculant, seed dressed fenpropimorph, lindane and thiram |

- NOTES:** (1) Irrigation was applied at 17 mm on 10 Oct, 1989.
(2) The FORMULAT - BROTH treatment was applied as a bacterial culture in standard nutrient broth dripped into the seed furrow at planting.

Basal applications: Manures: 'Nitram' at 290 kg on two occasions.
Weedkillers: Paraquat at 0.60 kg ion in 200 l. Fluazifop-P-butyl at 0.12 kg with metazachlor at 1.2 kg and a wetting agent, 'Enhance' at 0.40 l, in 400 l.

Seed: Cobra, sown at 7.0 kg.

Cultivations, etc.:- Cultivated by rotary grubber: 27 July, 1989.
Paraquat applied: 18 Aug. Rotary harrowed: 22 Aug and 18 Sept. Seed sown: 19 Sept. Remaining weedkillers with wetting agent applied: 25 Oct. First N applied: 16 Feb, 1990. Second N applied: 14 Mar. Combine harvested: 25 July. Previous crops: S. wheat 1988, w. barley 1989.

90/R/RA/7

NOTE: Seedling emergence counts were made and vigour was assessed during the season. Dates of flowering were noted.

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

FORMULAT INOCLANT	BROTH	SLURRY	Mean
B SUBT 1	2.50	2.78	2.64
B SUBT 2	2.61	2.76	2.68
Mean	2.56	2.77	2.66

SEEDRESS INOCLANT	NONE	FE+LI+TH	Mean
B SUBT 1	2.75	2.53	2.64
B SUBT 2	2.77	2.60	2.68
Mean	2.76	2.56	2.66

SEEDRESS FORMULAT	NONE	FE+LI+TH	Mean
BROTH	2.61	2.50	2.56
SLURRY	2.91	2.63	2.77
Mean	2.76	2.56	2.66

INOCLANT	SEEDRESS FORMULAT	NONE	FE+LI+TH
B SUBT 1	BROTH	2.59	2.40
	SLURRY	2.91	2.65
B SUBT 2	BROTH	2.63	2.59
	SLURRY	2.91	2.60

EXTRA	BO SO	BO SFLT	Mean
	2.41	2.83	2.62

GRAND MEAN 2.65

*** Standard errors of differences of means ***

INOCLANT	FORMULAT	SEEDRESS	INOCLANT FORMULAT
0.090	0.090	0.090	0.127
INOCLANT SEEDRESS	FORMULAT SEEDRESS	INOCLANT FORMULAT SEEDRESS	EXTRA
0.127	0.127	0.180	0.180

90/R/RA/7

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	27	0.255	9.6
MEAN DM%	87.0		
PLOT AREA HARVESTED	0.00230		