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# Yields of the Field Experiments 1984

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## 84/R/FE/1 N, *Rhizobium* and Pest Control - Fenugreek

### Rothamsted Research

Rothamsted Research (1985) *84/R/FE/1 N, Rhizobium and Pest Control - Fenugreek* ; Yields Of The Field Experiments 1984, pp 311 - 312 - DOI: <https://doi.org/10.23637/ERADOC-1-32>

84/R/FE/1

FENUGREEK

N, RHIZOBIUM AND PEST CONTROL

Object: To study the effects of inoculation with Rhizobium, application of insecticide and times of applying nitrogen fertilizer on nodulation and yield of fenugreek (*Trigonella foenum - graecum*) - Long Hoos III 7.

Sponsor: D.P. Yeoman.

Design: 2 randomised blocks of 14 plots.

Whole plot dimensions: 2.64 x 8.00.

Treatments: All combinations of:-

1. INOCULUM            Inoculum applied to the seed:  
    NONE                None  
    RHIZOBUM           Rhizobium meliloti, strain 2012, as a peat culture
2. N                    Nitrogen fertilizer (kg N) and times of application:  
    0                    None  
    150 S                150 to the seedbed, on 14 May, 1984  
    150 F                150 at flowering, on 16 July
3. INSECTICIDE        Insecticide:  
    NONE                None  
    PERMETH            Permethrin foliar spray at 0.053 kg in 220 l on 15 June and 6 July

plus two extra treatments, each given 30 kg N to the seedbed and permethrin as above:

EXTRA

- |          |                             |
|----------|-----------------------------|
| O N30S P | No inoculum                 |
| R N30S P | Rhizobium inoculum as above |

Basal applications: Manures: Chalk at 2.9 t. Weedkillers: Glyphosate at 0.72 kg in 200 l. MCPB at 2.24 kg in 220 l. Trifluralin at 0.81 kg in 220 l. Desiccant: Diquat at 0.84 kg ion in 220 l on two occasions.

Seed: Barbara, sown at 29 kg.

Cultivations, etc.:- Chalk applied: 26 Aug, 1983. Glyphosate applied: 16 Dec. Ploughed: 30 Jan, 1984. Spring-tine cultivated, trifluralin applied, power harrowed, seed sown: 14 May. MCPB applied: 5 July. Hand weeded: 24 July. Desiccant applied: 7 Sept, 12 Sept. Combine harvested: 27 Sept. Previous crops: S. wheat 1982, mixed cereals 1983.

NOTE: Plant counts were made after establishment. N content of grain was measured.

84/R/FE/1

GRAIN TONNES/HECTARE

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

|          | N | 0    | 150 S | 150 F | MEAN |
|----------|---|------|-------|-------|------|
| INOCULUM |   |      |       |       |      |
| NONE     |   | 0.05 | 0.11  | 0.07  | 0.08 |
| RHIZOBUM |   | 0.09 | 0.11  | 0.07  | 0.09 |
| MEAN     |   | 0.07 | 0.11  | 0.07  | 0.08 |

|          | INSCTCDE | NONE | PERMETH | MEAN |
|----------|----------|------|---------|------|
| INOCULUM |          |      |         |      |
| NONE     |          | 0.06 | 0.09    | 0.08 |
| RHIZOBUM |          | 0.09 | 0.09    | 0.09 |
| MEAN     |          | 0.08 | 0.09    | 0.08 |

|       | INSCTCDE | NONE | PERMETH | MEAN |
|-------|----------|------|---------|------|
| N     |          |      |         |      |
| 0     |          | 0.06 | 0.08    | 0.07 |
| 150 S |          | 0.08 | 0.14    | 0.11 |
| 150 F |          | 0.08 | 0.05    | 0.07 |
| MEAN  |          | 0.08 | 0.09    | 0.08 |

|          | N | 0    | 150 S | 150 F |
|----------|---|------|-------|-------|
| INSCTCDE |   |      |       |       |
| NONE     |   | 0.05 | 0.05  | 0.09  |
| RHIZOBUM |   | 0.08 | 0.11  | 0.07  |
| NONE     |   | 0.05 | 0.17  | 0.05  |
| RHIZOBUM |   | 0.08 | 0.12  | 0.11  |
| NONE     |   | 0.09 | 0.07  | 0.06  |
| PERMETH  |   | 0.05 | 0.11  | 0.05  |
| PERMETH  |   | 0.05 | 0.11  | 0.05  |

| EXTRA | 0 | N30S | P    | R | N30S | P    | MEAN |
|-------|---|------|------|---|------|------|------|
|       |   |      | 0.09 |   |      | 0.10 | 0.09 |

GRAND MEAN 0.09

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

| TABLE | EXTRA | INOCULUM | N     | INSCTCDE |
|-------|-------|----------|-------|----------|
| SED   | 0.043 | 0.018    | 0.022 | 0.018    |

| TABLE | INOCULUM         | INOCULUM | N        | INOCULUM |
|-------|------------------|----------|----------|----------|
|       | N                | INSCTCDE | INSCTCDE | N        |
|       | INSCTCDE & EXTRA |          |          |          |
| SED   | 0.031            | 0.025    | 0.031    | 0.043    |

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

| STRATUM  | DF | SE    | CV%  |
|----------|----|-------|------|
| BLOCK.WP | 13 | 0.043 | 50.5 |

GRAIN MEAN DM% 55.9  
 PLOT AREA HARVESTED 0.00154