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# Yields of the Field Experiments 1960



Full Table of Content

# 60/W/CC/2 Spring Oats - Trap Cropping of Eelworm

# **Rothamsted Research**

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60/Cc/2.1

#### OATS

Trap cropping of eelworm - Woburn, Butt Furlong 1960.

Design: 6 randomised blocks of 6 plots each.

Area of each plot: 0.0106 acres. Area harvested: 0.0071 acres.

Treatments. All combinations of:-

Trap crop 1958 and 1959. Spring oats; Spring rye; Fallow. (all plots ploughed in May or June)

Green manure: None; mustard sown in June and ploughed in in autumn.

The whole experiment was sown to spring oats in 1960.

Note: Mustard failed in 1959 and was ploughed in and resown on July 24.

Basal dressings per acre:

1958: 5 cwt compound fertiliser (12% N; 9% P<sub>2</sub>O<sub>5</sub>; 9% K<sub>2</sub>O) combine drilled with oats and rye and broadcast on the plots to be sown only with mustard. 2 cwt 'Nitro-Chalk' (15.5% N) to all plots at time of sowing mustard.

1959: Compound fertiliser as in 1958. 1½ cwt 'Nitra-Shell' to all plots at time of sowing mustard.

1960: 4 cwt compound fertiliser (16% N; 9% P205; 9% K20) combine drilled.

# Cultivations, etc.:

- 1958: Ploughed: Aug 29 30, 1957. Sprayed twice with TCA at 20 lb in 40 gallons per acre: Sept 30 and Dec 9. Dung applied at 12 tons per acre: Jan 21 24. Ploughed: Mar 5 7, 1958. Oats and rye combine drilled with basal fertiliser: Mar 25. Basal compound fertiliser applied to mustard only plots: Apr 3. All plots ploughed: May 30. 'Nitro-Chalk' applied: June 3. Mustard sown: June 5. All plots ploughed: July 19. All mustard plots ploughed: Oct 28.
- 1959: Basal compound fertiliser applied to mustard only plots, oats and rye combine drilled with basal compound fertiliser:

  Mar 17, 1959. Extra 'Nitro-Chalk' applied to all plots to improve the crop: Apr 25. Oats and rye plots ploughed: June 2. 'Nitra-Shell' applied and mustard sown:

  June 3. Owing to failure of mustard following oats and rye, all mustard cut and removed, and all plots ploughed: July 17.

  Mustard resown: July 24. All mustard plots ploughed: Sept 2.
- 1960: Ploughed: Jan 9, 1960. Oats combine drilled at 4 bushels per acre with basal compound fertiliser: Mar 8. Sprayed with TCB/MCPA at 4 pints in 40 gallons per acre: May 7. Combine harvested: Aug 19. Varieties: Oats; 1958 and 1959 Sun II, 1960 Condour; Rye: King II. Previous crop: Oats (1957).

60/cc/2.2

Note: Periodic estimates of eelworm population were made.

Standard error per plot.

Grain (at 85% dry matter): 3.19 cwt per acre or 11.4% (25 d.f.)

### Summary of Results

# Trap crops 1958 and 1959

Green manure	0ats	Rye	Fallow	Mean
Gr	ain (at 85% d	ry matter): cw	t per acre	
	1			
None Mustard	27.7 28.1	31.7 30.9	23.8 25.9	27.7 28.3
Mean (±0.91) Diff. (±1.84)	27 <b>.</b> 9 +0 <b>.</b> 4	31.3 -0.8	24.9 +2.1	28.0 +0.6 (±1.06)

Mean dry matter % as harvested: 80.4

	Straw (at 85% dry matter): cwt per acre				
None	22.6	24.7	19.1	22.1	
Mustard	23.9	26.0	24.0	24.6	
Mean	23.2	25.3	21.6	23.3	
Diff.	+1.3	+1.3	+4.9		

Mean dry matter % as harvested: 46.1