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Yields of the Field Experiments 1960

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

Rothamsted Research

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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% P₂O₅; 9% K₂O) 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 'Nitro-Shell' to
all plots at time of sowing mustard.

1960: 4 cwt compound fertiliser (16% N; 9% P₂O₅; 9% K₂O) 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. 'Nitro-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	Oats	Rye	Fallow	Mean
<u>Grain (at 85% dry matter): cwt per acre</u>				
		(±1.30)		
None	27.7	31.7	23.8	27.7
Mustard	28.1	30.9	25.9	28.3
Mean (±0.94)	27.9	31.3	24.9	28.0
Diff. (±1.84)	+0.4	-0.8	+2.1	+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	+2.5

Mean dry matter % as harvested: 46.1