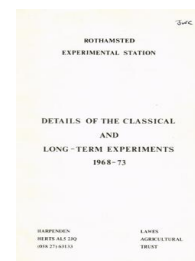


Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Details of the Classical and Long-term Experiments 1968-73



[Full Table of Content](#)

W/RN/15 Rotation and Fumigation - Barley, Potatoes, Sugar Beet

Rothamsted Research

Rothamsted Research (1977) *W/RN/15 Rotation and Fumigation - Barley, Potatoes, Sugar Beet* ;
Details Of The Classical And Long-Term Experiments 1968-73, pp 65 - 66 - **DOI:**

<https://doi.org/10.23637/ERADOC-1-193>

ROTATION AND FUMIGATION

WOBURN BUTT CLOSE

(W/RN/15)

This experiment, started in 1969, is designed to study different ways of using nematicides in a three-course rotation and to determine the effects on crop yield and incidence of pathogenic nematodes.

Design

3 series each of 2 blocks of 3 plots split into 7. One phase of a 3-course rotation, potatoes, barley and sugar beet is present in each series.

Treatments

Each crop tests all combinations of:—

<i>Whole plots:</i>	N fertiliser (kg N)	
	Potatoes and Sugar beet	Barley
	75	38
	150	75
	225	113

<i>Sub-plots:</i>	Fumigants	
(a)	None	
(b)	Dichloropropane/dichloropropene	
	(‘D-D’ at 448 kg):	before potatoes
		before sugar beet
		before barley
		before all crops

Plus 2 reserve sub-plots: one no fumigant:
one allocated in 1970 to dazomet at 224 kg before all crops after no treatment in 1969.

NOTE: ‘D-D’ has been injected into ploughed or cultivated soil in autumn or early winter. Dazomet has been applied and rotary cultivated in before the ‘D-D’ injection except in December 1971 when it was worked in the following day. In 1971 and 1972 all sub-plots were rotary cultivated, in 1970 and 1973 only dazomet-treated sub-plots were cultivated following application.

Standard manuring

Barley:	310 kg (0-20-20)
Potatoes:	1050 kg (0-14-28)
Sugar beet:	1050 kg (0-14-28)
1971:	13 kg B ₂ O ₃ as ‘Solubor’
1972 & ’73:	7 kg B ₂ O ₃ as ‘Solubor’

Liming

1971-73: 2.5 t magnesian limestone in autumn before sugar beet.

Varieties

Barley:	1969	Zephyr
	1970-73	Julia (dressed with ethirimol 1972 and 73)

Potatoes:	1969	King Edward
	1970-73	Pentland Crown
Sugar beet	1969-73	Klein E

Weedkillers

Barley:	1969-72	Ioxynil with mecoprop
Potatoes:	1969-73	Linuron: alone 1971 and 1973 and with paraquat in 1969, 70 and 72.
Sugar beet:	1969-70 and 1972-73	Phenmedipham; and paraquat in 1972

Other chemicals applied

Fungicides	Potatoes	1969-73	Mancozeb
Insecticides	Potatoes and Sugar beet	1969-73	Demeton-s-methyl

Plot area harvested

Barley	0.00052
Potatoes	0.00052 – 0.00104
Sugar beet	0.00057 – 0.00156

Soil series Cottenham series