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67/S/SAX/SS/1/C/35 Soil Sterilization

Rothamsted Research

Rothamsted Research (1968) *67/S/SAX/SS/1/C/35 Soil Sterilization* ; Yields Of The Field Experiments 1967, pp 239 - 240 - DOI: <https://doi.org/10.23637/ERADOC-1-157>

67/C/35.1

SOIL STERILISATION EXPERIMENT

(SAX/SS/1)

Soil sterilisation and N, Saxmundham, Grove Plot, 1967 - barley, potatoes, sugar beet.

Design (each crop)*: 3 randomised blocks of 5 plots, with one plot sterilised and split for N.

* One block of potatoes was abandoned due to water-logging.

Area of each plot: 0.0022. Area harvested: 0.0019.

Treatments: No N	(NO)
0.5 cwt N	(N1)
1.0 cwt N	(N2)
1.5 cwt N	(N3)
Sterilised with methyl bromide** and plots split for N1 v N2	(S)

All N as 'Nitro-Chalk'.

** At 520 lb.

Basal applications: 1.0 cwt P₂O₅, 2.0 cwt K₂O as (0:10:20).

Cultivations, etc.: Ploughed: Nov 29 - Dec 16, 1966. Basal PK applied: Mar 15, 1967. N applied, methyl bromide applied: Mar 21.

Potatoes: Planted: Mar 29, 1967. Lifted: Sept 1. Variety: King Edward.

Barley: Seed drilled: Mar 29, 1967. Harvested by hand: Aug 15. Variety: Maris Badger.

Sugar beet: Seed drilled: Mar 30, 1967. Lifted: Sept 19. Variety: Klein E.

Previous crops: Barley 1965, fallow 1966.

NOTE: The yields from the two halves of the S plots (SN1 and SN2) were bulked at harvest.

67/c/35.2

Standard errors per plot.

Potatoes. Total tubers: 1.683 or 17.3% (4 d.f.)
 Barley. Grain: 4.24 or 13.3% (8 d.f.)
 Sugar beet. Roots (washed): 2.743 or 15.1% (8 d.f.)
 Tops: 2.026 or 23.3% (8 d.f.)

SUMMARY OF RESULTS

NO	N1	N2	N3	S	Mean
POTATOES					
TOTAL TUBERS					
(±1.190)					
8.48	9.56	8.91	9.72	11.84	9.70
BARLEY					
GRAIN					
(±2.45)					
17.6	31.8	34.9	38.9	36.1	31.9
STRAW					
16.0	31.8	36.7	43.2	40.7	33.7
SUGAR BEET					
ROOTS					
(±1.584)					
14.88	17.74	17.93	20.36	19.89	18.16
TOPS					
(±1.170)					
7.95	6.81	10.43	11.07	7.14	8.68