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71/W/CS/52 Fumigants, Temik and N - S. Wheat

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71/W/CS/52

FUMIGANTS, TEMIK AND N

Object: To study the effects of dazomet, formalin and aldicarb, at a range of nitrogen levels, on nematodes and yield of spring wheat - Woburn Butt Close.

The first year, spring wheat.

Design: 4 blocks of 12 plots.

Whole plot dimensions: 2.13 x 9.14. Area harvested: 0.00130.

Treatments: All combinations of:-

1. Fumigants: None (0) 381 kg (D) dazomet 2987 l(F)
formalin (38% formaldehyde) 9 kg (T) aldicarb.
2. Nitrogen: 63, 126, 189 kg N as 'Nitro-Chalk'.

Dazomet was applied as a prill rotary cultivated in, formalin as a drench with water 54,400 l both applied in the autumn. Aldicarb was applied in the spring.

Basal applications: 381 kg (0:20:20). Weedkiller: Ioxynil at 0.525 kg and mecoprop at 1.58 kg in 281 l.

Cultivations, etc.: Ploughed: 3 Sept, 1970. Dazomet applied, rotary cultivated: 28 Sept. Formalin applied: 12 - 13 Oct. Ploughed: 9 Feb, 1971. Aldicarb applied: 8 Mar. Seed combine drilled at 191 kg: 17 Mar. N applied: 25 Mar. Weedkiller applied: 30 Apr. Combine harvested: 17 Aug. Variety: Kolibri. Previous crops: Barley 1969 and 1970.

NOTE: Soil samples were taken before fumigating and after harvest, and crop samples were taken in June, for counts of *Heterodera avenae*.

Standard error per plot.

Grain, tonnes/hectare: 0.375 or 14.9% (33 d.f.)

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SUMMARY OF RESULTS

N: KG/HA

	63	126	189	Mean
GRAIN: TONNES/HECTARE				
(±0.188)				
O	2.33	2.24	2.04	2.20
D	2.78	2.38	2.22	2.46
F	2.32	2.08	2.13	2.18
T	3.21	3.51	2.91	3.21
Mean (±0.094)	2.66	2.55	2.33	2.51
STRAW: TONNES/HECTARE				
O	2.55	2.31	2.37	2.41
D	2.70	2.61	2.64	2.65
F	2.53	2.24	2.12	2.30
T	2.92	3.01	2.87	2.94
Mean	2.68	2.54	2.50	2.57

Mean D.M. %: Grain: 80.8
 Straw: 79.7