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79/W/CS/66 Dazomet and Nitrogen - Maize

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79/W/CS/66

DAZOMET AND NITROGEN

Object: To study the cumulative effects of dazomet and nitrogen on pathogens and yield of maize grown continuously - Woburn Butt Furlong.

Sponsors: A.J. Barnard, D. Hornby.

The ninth year, maize.

For previous years see 71/W/CS/66(t), 72/W/CS/66(t) and 73-78/W/CS/66.

Design: 4 blocks of 2 plots split into 4.

Whole plot dimensions: 2.13 x 16.5.

Treatments: All combinations of:-

Whole plots

1. DAZOMET Dazomet (kg per annum) cumulative 1971-79:

0
450

Sub plots

2. N Nitrogen fertiliser (kg N as 'Nitro-Chalk') cumulative 1971-79:

50	50 to seedbed
100	100 to seedbed
150	150 to seedbed
50+100	100 to seedbed, 50 four weeks before sowing (before 1978 this treatment received 100 to seedbed, 50 five weeks after emergence)

Basal applications: Manures: (0:14:28) at 870 kg. Weedkiller: Atrazine at 1.1 kg in 340 l.

Seed: Fronica, sown at 103,300 seeds per hectare.

Cultivations, etc.: - Ploughed: 17 Nov, 1978. Spring-tine cultivated: 20 Nov. Dazomet applied, rotary cultivated: 23 Nov. Early N applied: 19 Apr, 1979. PK applied: 7 May. Spring-tine cultivated with crumbler attached: 8 May. Seed sown: 17 May. Seedbed N applied: 4 June. Weedkiller applied: 6 June. Hand harvested: 24 Oct.

- NOTES: (1) Soil samples were taken before sowing and after harvest for counts of ectoparasitic nematodes.
(2) Counts were made of common smut (*Ustilago maydis*) and stalk rots (*Fusarium* spp.).
(3) Because of bird damage, yields from 2 whole plots were lost, those with DAZOMET 0 and 450. Estimated values were used in the analysis.

79/W/CS/66

FORAGE DRY MATTER TONNES/HECTARE

***** TABLES OF MEANS *****

	N	50	100	150	50+100	MEAN
DAZOMET						
0		8.39	10.14	12.55	11.25	10.58
450		11.54	11.82	14.69	12.41	12.61
MEAN		9.96	10.98	13.62	11.83	11.60

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	N	DAZOMET*
		N
SED	0.605	0.856

* WITHIN THE SAME LEVEL OF DAZOMET ONLY

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP.SP	12	1.211	10.4

GRAIN MEAN DM% 27.2

SUB PLOT AREA HARVESTED 0.00039