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Yields of the Field Experiments 1975

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75/ W/CS/66 - Dazomet & Nitrogen - Maize

Rothamsted Research

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75/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 fifth year, maize.

For previous years see 71/W/CS/66(t), 72/W/CS/66(t) and 73-74/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 (kg per annum) cumulative 1971-75:	DAZOMET
0	0
450	450
Sub plots: 2. Nitrogen fertiliser (kg N per annum) cumulative 1971-75:	N
50 to seedbed	50
100 to seedbed	100
150 to seedbed	150
100 to seedbed, 50 five weeks after germination	100+50

Basal applications: Manures: (0:14:28) at 860 kg. Weedkiller: Atrazine at 1.1 kg in 280 l.

Seed: Cargill Primeur 170 sown at 124,000 seeds per ha.

Cultivations, etc.:- Ploughed: 31 Dec, 1974. Spring-tine cultivated: 10 Jan, 1975. Dazomet applied, all plots rotary harrowed: 14 Jan. Deep-tine cultivated: 28 Apr. Spring-tine cultivated with crumbler, PK applied: 29 Apr. Weedkiller applied: 8 May. Rotary cultivated: 9 May. Seed sown by hand: 13 May. N applied: 29 May. Late N applied: 15 July. Harvested by hand: 27 Oct.

- NOTES: (1) Because of damage to developing cobs by birds, forage yields only were taken.
- (2) Soil samples were taken in spring before sowing and again after harvest for counts of ectoparasitic nematodes.
- (3) Plants with soil were sampled on three occasions for nematode counts and incidence of stem and leaf pathogens.
- (4) Visual scores were made of common smut (*Ustilago maydis*) and *Fusarium* spp.

75/W/CS/66

*** TABLES OF MEANS ***

FORAGE DRY MATTER TONNES/HECTARE

	N	50	100	150	100+50	MEAN
DAZOMET						
0		7.98	9.13	10.32	11.23	9.67
450		9.71	12.05	12.16	11.85	11.44
MEAN		8.84	10.59	11.24	11.54	10.55

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

TABLE	N	DAZOMET
-----		N
SED	0.848	1.369
ONLY WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:		
DAZOMET		1.199

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

STRATUM	DF	SE	CV%
BLOCK.WP.SP	18	1.696	16.1

MEAN DM% 36.3

SUB PLOT AREA HARVESTED 0.00039