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80/W/CS/66 Dazomet and Nitrogen

Rothamsted Research

Rothamsted Research (1981) *80/W/CS/66 Dazomet and Nitrogen* ; Yields Of The Field Experiments 1980, pp 117 - 118 - DOI: <https://doi.org/10.23637/ERADOC-1-31>

80/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 tenth year, forage maize.

For previous years see 71/W/CS/66(t), 72/W/CS/66(t) and 73-79/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, residual 1980:

0
450

Sub plots

2. N Nitrogen fertiliser (kg N as 'Nitro-Chalk') cumulative 1971-80:

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

Basal applications: Manures: Magnesian limestone at 2.5 t, (0:14:28) at 630 kg. Weedkiller: Atrazine at 1.1 l in 280 l.

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

Cultivations, etc.:- Magnesian limestone applied: 31 Oct, 1979. Ploughed, spring-tine cultivated: 2 Nov. Heavy spring-tine cultivated: 29 Feb, 1980. Spring-tine cultivated with crumbler attached: 7 Apr. Early N and PK applied: 16 Apr. Weedkiller applied, and harrowed in, seed sown: 30 Apr. Seedbed N applied: 1 May. Hand harvested: 6 Oct.

- NOTES: (1) Soil samples were taken in July 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 poor germination, yields from 2 subplots were lost, one DAZOMET 0, N 50 + 100 the other DAZOMET 450, N 150. Estimated values were used in the analysis.

80/W/CS/66

FORAGE DRY MATTER TONNES/HECTARE

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

	N	50	100	150	50+100	MEAN
DAZOMET						
0		8.78	11.61	13.67	13.87	11.98
450		9.58	12.29	15.03	13.51	12.60
MEAN		9.18	11.95	14.35	13.69	12.29

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

TABLE	N	DAZOMET*
		N

SED	0.647	0.915

* WITHIN THE SAME LEVEL OF DAZOMET ONLY

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

STRATUM	DF	SE	CV%
BLOCK.WP.SP	16	1.294	10.5

GRAIN MEAN DM% 24.8

SUB PLOT AREA HARVESTED 0.00039