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78/R/CS/133 Control of Pathogens - Maize

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78/R/CS/133

CONTROL OF PATHOGENS

Object: To study the effects of a range of chemicals on incidence of pathogens and yield of continuous maize - Long Hoos VI/VII 6.

Sponsors: A.J. Barnard, K.E. Fletcher, D.J. Hooper, D. Hornby, R.T. Plumb, T.D. Williams, J.C. Wilson.

The fifth year, forage maize.

For previous years see 74-77/R/CS/133.

Design: 3 randomised blocks of 9 plots split into 3.

Whole plot dimensions: 2.13 x 18.3.

Treatments: All combinations of:-

Whole plots

- | | |
|-------------|--|
| 1. CHEMICAL | Chemicals applied annually except where stated: |
| NONE | None (4 plots per block) |
| ALDICARB | Aldicarb, 4.5 kg as granules to seedbed |
| BENOMYL | Benomyl, 11.2 kg as dust to seedbed |
| DAZOMET | Dazomet, 450 kg as granules in early spring (not applied 1975) |
| PHORATE | Phorate, 1.68 kg as granules to seedbed |
| BE/DA/PH | Benomyl + dazomet (not applied 1975) + phorate, at above rates and times |

Sub plots

- | | |
|------|---|
| 2. N | Nitrogen fertiliser (kg N as 'Nitra-Shell 34'): |
| 50 | |
| 100 | |
| 150 | |

Basal applications: Manures: Chalk at 2.9 t. (0:14:28) at 630 kg. Weedkillers: Atrazine at 1.7 kg in 220 l.

Seed: Fronica, sown at 100,000 seeds per hectare.

Cultivations, etc.: - PK applied: 23 Nov, 1977. Chalk applied: 25 Nov. Ploughed: 7 Dec. Dazomet applied and these plots only rotary cultivated: 7 Apr, 1978. All other treatments applied, power harrowed: 18 May. Seed sown: 19 May. Weedkiller applied: 22 May. N applied: 14 June. Harvested by hand: 2 Oct.

NOTES: (1) Germination was assessed in June.
(2) Frit fly (*Oscinella frit*) damage was assessed.
(3) Nitrogen percentages in harvest produce were determined.

78/R/CS/133

FORAGE MAIZE TONNES/HECTARE

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

	N	50	100	150	MEAN
CHEMICAL					
NONE		9.81	11.84	12.49	11.38
ALDICARB		10.39	12.54	14.04	12.32
BENOMYL		9.78	12.71	12.49	11.66
DAZOMET		11.29	12.72	12.71	12.24
PHORATE		9.56	12.18	12.16	11.30
BE/DA/PH		11.87	12.92	13.56	12.78
MEAN		10.24	12.27	12.77	11.76

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

TABLE	CHEMICAL	N	CHEMICAL	
			N	
SED	0.418		0.744	MIN REP
	0.330	0.252	0.589	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
CHEMICAL			0.755	MIN REP
			0.377	MAX REP

CHEMICAL
 MAX REP WITHIN NONE
 MAX-MIN NONE V REMAINDER
 MIN REP REMAINDER

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

STRATUM	DF	SE	CV%
BLOCK.WP	19	0.512	4.4
BLOCK.WP.SP	42	0.924	7.9

GRAIN MEAN DM% 26.0

SUB PLOT AREA HARVESTED 0.00059