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

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79/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 sixth year, forage maize.

For previous years see 74-78/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 (2 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 & 1979) |
| PERMETH | Permethrin, 0.15 kg as foliar spray on 3 Aug (1979 only) |
| PHORATE | Phorate, 1.68 kg as granules to seedbed |
| PIRIMICA | Pirimicarb, 0.14 kg as foliar spray on 3 Aug (1979 only) |
| BE/DA/PH | Benomyl + dazomet (not applied 1975 & 1979) + phorate, at above rates and times |

Sub plots

- | | |
|------|-----------------------------|
| 2. N | Nitrogen fertiliser (kg N): |
| 50 | |
| 100 | |
| 150 | |

NOTE: Treatment sprays were applied in 340 l.

Basal applications: Weedkiller: Atrazine at 1.7 kg in 340 l.

Seed: Caldera 535, sown at 100,000 seeds per hectare.

Cultivations, etc.: - Ploughed: 9 Feb, 1979. Spring-tine cultivated: 16 May. Seedbed treatments applied, power harrowed, seed sown: 8 June. Weedkiller applied: 11 June. Harvested by hand: 8 Nov.

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

79/R/CS/133

FORAGE MAIZE TONNES/HECTARE

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

	N	50	100	150	MEAN
CHEMICAL					
NONE		5.73	5.94	5.87	5.85
ALDICARB		6.67	6.59	8.14	7.13
BENQMYL		6.08	6.38	6.87	6.44
DAZOMET		5.90	7.08	6.84	6.61
PERMETH		5.83	5.97	6.50	6.10
PHORATE		6.02	6.28	6.17	6.16
PIRIMICA		6.60	6.57	7.25	6.81
BE/DA/PH		6.74	6.86	7.36	6.99
MEAN		6.14	6.40	6.76	6.44

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

TABLE	CHEMICAL	N	CHEMICAL	
			N	
SED	0.370		0.528	MIN REP
	0.321	0.153	0.457	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
CHEMICAL			0.460	MIN REP
			0.326	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	17	0.454	7.0
BLOCK.WP.SP	38	0.564	8.8

GRAIN MEAN DM% 20.6

SUB PLOT AREA HARVESTED 0.00059