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Yields of the Field Experiments 1976

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

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76/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 third year, maize.

For previous years see 74-75/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 drilled with the seed
BE/DA/PH	Benomyl + dazomet (not applied 1975) + phorate, at above rates and times

Sub plots

2. N Nitrogen fertiliser (kg N):

50	50
100	100
150	150

NOTE: Plots were divided for yields at forage and grain stage.

Basal applications: Manures: (0:14:28) at 850 kg. Weedkiller: Atrazine ('Vectal' at 3.4 kg in 340 l).

Seed: Cargill Primeur 170, sown at 123,000 seeds per ha.

Cultivations, etc.: - Rotary cultivated: 12 Nov, 1975. PK applied: 9 Dec. Dazomet applied, all plots rotary cultivated: 10 Dec. Ploughed: 6 Jan, 1976. Spring-tine cultivated: 24 Mar, 20, 22 Apr. Aldicarb and benomyl treatments applied and these plots only rotary cultivated: 11 May. Seed-sown: 17 May. Harrowed: 19 May. Weedkiller applied: 2 June. N applied: 6 June. Part plots harvested for forage: 20 Oct. Part plots harvested for grain: 25 Nov.

NOTES: (1) Frit fly (*Oscinella frit*) damage was assessed.
(2) Nitrogen percentages of forage and grain were determined.

76/R/CS/133

GRAIN MAIZE TONNES/HECTARE

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

CHEMICAL N	NONE	ALDICARB	BENOMYL	DAZOMET	PHDRATE	EE/DA/PH	MEAN
50	3.28	3.77	3.57	3.45	3.37	3.48	3.42
100	3.27	3.61	3.44	3.01	3.72	3.31	3.35
150	3.27	3.52	4.27	4.22	3.45	3.89	3.60
MEAN	3.27	3.63	3.76	3.56	3.51	3.56	3.46

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

TABLE	N	CHEMICAL	N	CHEMICAL
SED		0.485	0.646	MIN REP
	0.174	0.383	0.511	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
CHEMICAL			0.522	MIN REP
			0.413	MAX-MIN
			0.261	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	0.594	17.2
BLOCK.WP.SP	42	0.640	18.5

GRAIN MEAN DM% 63.1

SUB PLOT AREA HARVESTED 0.00039

76/R/CS/133

FORAGE DRY MATTER TONNES/HECTARE

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

CHEMICAL N	NONE	ALDICARB	BENOMYL	DAZOMET	PHORATE	BE/DA/PH	MEAN
50	9.61	11.32	8.56	9.79	9.34	11.23	9.85
100	10.59	9.41	12.75	9.88	9.86	9.48	10.41
150	10.90	12.91	9.72	10.47	11.30	11.46	11.05
MEAN	10.37	11.21	10.34	10.05	10.17	10.72	10.44

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

TABLE	N	CHEMICAL	N	CHEMICAL
REP	27	UNEQUAL	UNEQUAL	
SED		0.898	1.467	MIN REP
	0.474	0.710	1.160	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
CHEMICAL			1.421	MIN REP
			1.123	MAX-MIN
			0.710	MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	19	1.100	10.5
BLOCK.WP.SP	42	1.740	16.7

MEAN DM% 28.5

PLOT AREA HARVESTED 0.00020