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# Yields of the Field Experiments 1983

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## 83/R/CS/133 Control of Pathogens - Maize

### Rothamsted Research

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83/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.

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The tenth year, forage maize.

For previous years see 74-82/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 and 1981)
PERMETH	Permethrin, 0.15 kg as foliar spray (1979 only)
PHORATE	Phorate, 1.68 kg as granules to seedbed
PIRIMICA	Pirimicarb, 0.14 kg as foliar spray (1979 only)
BE+DA+PH	Benomyl + dazomet (not applied 1975, 1979 & 1981) + phorate, at above rates and times

Sub plots

2. N	Nitrogen fertilizer (kg N), as 'Nitro-Chalk':
50	
100	
150	

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

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

Cultivations, etc.: - Ploughed: 20 Dec, 1982. Power harrowed, dazomet treatments applied and rotary cultivated in: 10 Mar, 1983. Spring-tine cultivated: 16 May. Remaining chemical treatments applied, power harrowed in: 17 May. Power harrowed, seed sown: 7 June. N treatments applied: 14 June. Weedkiller applied: 15 June. Harvested by hand: 11 Oct.

NOTE: Frit fly (*Oscinella frit*) damage was assessed. The N content of the harvested produce was measured.

83/R/CS/133

FORAGE MAIZE DRY MATTER TONNES/HECTARE

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

N	50	100	150	MEAN
CHEMICAL				
NONE	7.86	9.88	10.14	9.29
ALDICARB	7.79	8.91	9.86	8.85
BENOMYL	7.67	10.58	10.32	9.52
DAZOMET	9.81	10.57	11.77	10.72
PERMETH	8.08	9.18	9.49	8.92
PHORATE	6.98	8.80	9.91	8.56
PIRIMICA	7.53	9.57	10.22	9.11
BE+DA+PH	10.36	10.83	12.16	11.11
MEAN	8.22	9.80	10.45	9.49

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

TABLE	CHEMICAL	N	CHEMICAL	
			N	
SED	0.692		0.899	MIN REP
	0.600	0.234	0.778	MAX-MIN
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:				
CHEMICAL			0.702	MIN REP
			0.496	MAX REP

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

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

STRATUM	DF	SE	CV%
BLOCK.WP	17	0.848	8.9
BLOCK.WP.SP	38	0.860	9.1

FORAGE MEAN DM% 25.6

SUB PLOT AREA HARVESTED 0.00059