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74/R/M/6 Control of Frit Fly - Maize, Sweet Corn - Mixed Crops

74/R/M/6 Control of Frit Fly - Maize, Sweet Corn - Mixed Crops, Rothamsted Research (1975) Yields Of The Field Experiments 1974, pp 370 - 372 - DOI: <https://doi.org/10.23637/ERADOC-1-119>

74/R/M/6

MAIZE AND SWEET CORN

CONTROL OF FRIT FLY

Object: To study the effects of several insecticides applied at different times on the incidence of frit fly (*Oscinella frit*) and yield of maize and sweet corn. The effects of a molluscicide are also studied - Long Hoos VI.

Sponsors: J.C. Wilson, K.E. Fletcher.

Design: 3 randomised blocks of 2 plots split into 7.

Whole plot dimensions: 3.66 x 6.09. **Sub plot area harvested:** 0.00149.

Treatments: All combinations of:-

Whole plots: 1. Crop:	CROP
Grain maize, Pioneer 131	Maize
Sweet corn, Early King	Sweetcorn
Sub plots: 2. Chemicals:	CHEMICAL
None	None
Chlorfenvinphos foliar spray early (12 June)	Chlorf E
Chlorfenvinphos foliar spray later (8 July)	Chlorf L
Dimethoate foliar spray early (12 June)	Dimeth E
Dimethoate foliar spray later (8 July)	Dimeth L
Phorate granules drilled with the seed	Phorate
Methiocarb granules at crop emergence (13 June)	Methio

NOTE: Chlorfenvinphos applied at 1.35 kg in 340 l.

Dimethoate applied at 0.67 kg in 340 l.

Phorate applied at 1.68 kg.

Methiocarb applied at 0.22 kg.

Basal applications: Manures: (0:14:28) at 875 kg. 'Nitro-Chalk' at 500 kg.

Weedkiller: Atrazine ('Vectal' at 3.4 kg in 340 l).

Seed: Sown at 108,000 per ha.

71/R/M/6

Cultivations, etc.:— PK applied, ploughed: 12 Nov, 1973. Spring-tine cultivated: 24 Apr, 1974. Power harrowed: 1 May. N applied, power harrowed, seed sown: 2 May. Weedkiller applied: 21 May. Sweet corn harvested: 8 Oct. Grain maize harvested: 13 Dec. Previous crops: Winter wheat 1972, fallow 1973.

- NOTES: (1) Estimates of the effectiveness of control of frit fly were made on 5 July.
- (2) Marked plants in each treatment were used to assess damage by pest and possible phytotoxic effects.
- (3) Water traps were placed in each treatment to measure the activity of adult frit flies.
- (4) Length and weight of cobs and number of grains per cob, were measured after harvest on plants with and without frit fly damage.

Standard errors per plot:

Maize. Grain, tonnes/hectare: 0.122 or 9.9% (12 d.f.)

Sweet corn. Total saleable cobs, tonnes/hectare: 0.514 or 54.7% (12 d.f.)

No. of saleable cobs, thousands/hectare: 2.66 or 59.4% (12 d.f.)

74/R/M/6

TABLES OF MEANS

CROP

Maize

GRAIN: TONNES/HECTARE

None	CHEMICAL						Mean
	Chlorf E	Chlorf L	Dimeth E	Dimeth L	Phorate	Methio	
1.23	1.08	1.25	1.14	1.37	1.38	1.16	1.23

STANDARD ERRORS OF DIFFERENCES

CHEMICAL

0.100

Mean D.M. % 87.7

CROP

Sweetcorn

CHEMICAL							Mean
None	Chlorf E	Chlorf L	Dimeth E	Dimeth L	Phorate	Methio	
TOTAL SALEABLE COBS: TONNES/HECTARE							
0.66	0.61	0.67	0.99	0.91	2.01	0.73	0.94

STANDARD ERRORS OF DIFFERENCES

CHEMICAL

0.420

NUMBER OF SALEABLE COBS: THOUSANDS/HECTARE

2.9	2.9	2.9	5.2	3.8	10.5	3.1	4.5
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STANDARD ERRORS OF DIFFERENCES

CHEMICAL

2.17