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76/R/O/1 Sowing Dates and Insecticides - Oats

Rothamsted Research

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76/R/O/1

WINTER OATS

SOWING DATES AND INSECTICIDES

Object: To study the effects of dates of sowing and times of applying insecticides on the incidence of cereal aphids, barley yellow dwarf virus (BYDV) and yield of winter oats - Gt. Harpenden 1.

Sponsor: R.T. Plumb.

Design: 4 randomised blocks of 12 plots.

Whole plot dimensions: 6.40 x 22.9.

Treatments: All combinations of:-

1. SOW DATE Sowing dates:

22 SEP	22 September, 1975
20 OCT	20 October, 1975
24 NOV	24 November, 1975

2. INSECTICIDE(1) Phorate granules to seedbed:

NONE	None
PHORATE	Phorate at 5 kg

3. INSECTICIDE(2) Menazon spray:

NONE	None
MENAZON	Menazon (0.7 l 'Saphi-Col' in 450 l on 14 May, 1976)

NOTE: Because of an error INSECTICIDE(1) PHORATE was also applied to SOW DATE 20 OCT and 24 NOV on 22 Sept, 1975. Phorate was re-applied to these treatments to appropriate seedbeds.

Basal applications: Manures: (0:20:20) at 310 kg, combine drilled. 'Nitro-Chalk' at 310 kg. Weedkillers: Ioxynil at 0.53 kg with mecoprop at 1.6 kg (both as the potassium salt) in 220 l.

Seed: Peniarth, sown at 190 kg.

Cultivations, etc.: Deep-tine cultivated three times: 11, 12, 15 Sept, 1975. Heavy spring-tine cultivated: 15 Sept. Power harrowed for first sowing: 22 Sept. Spring-tine cultivated for second and third sowings: 10 Oct. N applied: 30 Mar, 1976. Weed-killer applied: 13 Apr. Combine harvested: 15 July. Previous crops: Winter wheat 1974, winter wheat and barley 1975.

NOTE: Seedling emergence counts were made. Aphid and virus counts were made on three occasions. Tiller counts were made twice and floret numbers once.

76/R/0/1

GRAIN TONNES/HECTARE

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

INSCTCDE(1)	NONE	PHORATE	MEAN
SOW DATE			
22 SEP	4.73	4.61	4.67
20 OCT	4.87	5.18	5.02
24 NOV	3.98	4.32	4.15
MEAN	4.52	4.70	4.61

INSCTCDE(2)	NONE	MENAZON	MEAN
SOW DATE			
22 SEP	4.68	4.66	4.67
20 OCT	5.05	4.99	5.02
24 NOV	4.12	4.19	4.15
MEAN	4.62	4.61	4.61

INSCTCDE(2)	NONE	MENAZON	MEAN
INSCTCDE(1)			
NONE	4.54	4.50	4.52
PHORATE	4.69	4.72	4.70
MEAN	4.62	4.61	4.61

INSCTCDE(2)	NONE			MENAZON		
SOW DATE	22 SEP	20 OCT	24 NOV	22 SEP	20 OCT	24 NOV
INSCTCDE(1)						
NONE	4.74	4.89	4.00	4.72	4.84	3.96
PHORATE	4.63	5.20	4.23	4.60	5.15	4.42

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

TABLE	INSCTCDE(1)	INSCTCDE(2)	SOW DATE	INSCTCDE(1)
				INSCTCDE(2)
SED	0.058	0.058	0.071	0.082

TABLE	INSCTCDE(1)	INSCTCDE(2)	INSCTCDE(1)
	SOW DATE	SOW DATE	INSCTCDE(2)
			SOW DATE
SED	0.101	0.101	0.142

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

STRATUM	DF	SE	CV%
BLOCK.WP	33	0.201	4.4

GRAIN MEAN DM% 86.7

PLOT AREA HARVESTED 0.00358