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80/R/B/2 Winter Barley Sowing Dates and Pathogen Control

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80/R/B/2

WINTER BARLEY

SOWING DATES AND PATHOGEN CONTROL

Object: To study the effects of times of applying fungicides and aphicide on the incidence of mildew, aphids and barley yellow dwarf virus and on the yield of w. barley - Gt. Knott I.

Sponsors: A. Bainbridge, M.E. Finney, J.F. Jenkyn, R.T. Plumb.

Design: 2 randomised blocks of 28 plots.

Whole plot dimensions: 2.13 x 6.10.

Treatments: All combinations of:-

1. SOW DATE Dates of sowing:

14 SEP	14 September
9 OCT	9 October

2. MILCON E Mildew control early date:

NONE	None
ETHIRIMO	Ethirimol seed dressing
TRIDEMOR	Tridemorph spray 14 SEP plots on 24 Oct, 1979 9 OCT plots on 13 Nov

3. MILCON M Mildew control mid date:

NONE	None
TRIDEMOR	Tridemorph spray 11 Apr, 1980

4. MILCON L Mildew control late date:

NONE	None
TRIDEMOR	Tridemorph spray 19 May

plus four extra treatments given ethirimol seed dressing and tridemorph sprays on 11 Apr and 19 May:

INSCTCDE

NONE	None
DEMETON	Demeton-s-methyl on 19 May

taken in all combinations with SOW DATE above

NOTES: (1) A planned test of demeton-s-methyl in November was not done because of inclement weather and very few aphids.

(2) Sprays of tridemorph were applied at 0.53 kg in 340 l, and demeton-s-methyl at 0.24 l in 340 l.

Basal applications: Manures: (0:14:28) at 360 kg. 'Nitro-Chalk' at 390 kg. Weedkillers: Mecoprop with bromoxynil and ioxynil (as 'Brittox' at 3.5 l) in 250 l.

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Seed: Hoppel, sown at 160 kg.

Cultivations, etc.: PK applied, heavy spring-tine cultivated twice: 13 Sept, 1979. Spring-tine cultivated for the first sowing: 14 Sept. Spring-tine cultivated for the second sowing: 9 Oct. Weedkillers applied: 7 Apr. N applied: 9 Apr. Combine harvested: 30 July: Previous crops: S beans 1978, potatoes 1979.

NOTE: Emergence counts were made early in the season. Diseases including viruses were assessed on six occasions. Numbers of stems and grains per ear were counted at maturity and 1000 grain weights were measured.

GRAIN TONNES/HECTARE

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

MILCON E SOW DATE	NONE	ETHIRIMO	TRIDEMOR	MEAN
14 SEP	11.06	10.85	11.08	11.00
9 OCT	9.36	9.21	9.50	9.36
MEAN	10.21	10.03	10.29	10.18

MILCON M SOW DATE	NONE	TRIDEMOR	MEAN
14 SEP	10.80	11.20	11.00
9 OCT	8.94	9.78	9.36
MEAN	9.87	10.49	10.18

MILCON M MILCON E	NONE	TRIDEMOR	MEAN
NONE	9.66	10.77	10.21
ETHIRIMO	10.09	9.98	10.03
TRIDEMOR	9.87	10.71	10.29
MEAN	9.87	10.49	10.18

MILCON L SOW DATE	NONE	TRIDEMOR	MEAN
14 SEP	11.07	10.92	11.00
9 OCT	9.44	9.28	9.36
MEAN	10.26	10.10	10.18

MILCON L MILCON E	NONE	TRIDEMOR	MEAN
NONE	10.25	10.18	10.21
ETHIRIMO	10.22	9.85	10.03
TRIDEMOR	10.31	10.27	10.29
MEAN	10.26	10.10	10.18

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GRAIN TONNES/HECTARE

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

MILCON L	NONE	TRIDEMOR	MEAN
MILCON M			
NONE	9.87	9.87	9.87
TRIDEMOR	10.64	10.33	10.49
MEAN	10.26	10.10	10.18

MILCON E	NONE	ETHIRIMO	TRIDEMOR
MILCON M	NONE	NONE	NONE
SOW DATE	TRIDEMOR	TRIDEMOR	TRIDEMOR
14 SEP	10.81	11.32	10.92
9 OCT	8.51	10.22	9.26
			10.79
			9.17
			10.67
			11.49
			9.06
			9.94

MILCON E	NONE	ETHIRIMO	TRIDEMOR
MILCON L	NONE	NONE	NONE
SOW DATE	TRIDEMOR	TRIDEMOR	TRIDEMOR
14 SEP	11.14	10.99	11.01
9 OCT	9.35	9.38	9.43
			10.70
			9.00
			11.07
			11.09
			9.54
			9.46

MILCON M	NONE	TRIDEMOR	TRIDEMOR
MILCON L	NONE	NONE	NONE
SOW DATE	TRIDEMOR	TRIDEMOR	TRIDEMOR
14 SEP	10.91	10.69	11.24
9 OCT	8.83	9.06	10.05
			11.15
			9.50

MILCON M	NONE	TRIDEMOR	TRIDEMOR
MILCON L	NONE	NONE	NONE
MFLCON E	TRIDEMOR	TRIDEMOR	TRIDEMOR
NONE	9.61	9.71	10.89
ETHIRIMO	10.23	9.95	10.20
TRIDEMOR	9.77	9.96	10.84
			10.65
			9.75
			10.58

MILCON M	NONE	TRIDEMOR	TRIDEMOR
MILCON L	NONE	NONE	NONE
MILCON E	TRIDEMOR	TRIDEMOR	TRIDEMOR
SOW DATE	TRIDEMOR	TRIDEMOR	TRIDEMOR
14 SEP	NONE	11.24	10.39
	ETHIRIMO	10.95	10.89
	TRIDEMOR	10.53	10.81
9 OCT	NONE	7.97	9.04
	ETHIRIMO	9.51	9.01
	TRIDEMOR	9.01	9.11
			11.05
			11.59
			11.06
			10.51
			11.61
			11.36
			10.72
			9.72
			8.99
			9.80

INSCTCDE	NONE	DEMETON	MEAN
SOW DATE			
14 SEP	11.20	10.57	10.89
9 OCT	9.70	9.49	9.60
MEAN	10.45	10.03	10.24

GRAND MEAN 10.19

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GRAIN TONNES/HECTARE

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

TABLE	INSCTCDE	SOW DATE	MILCON E	MILCON M
SED	0.524	0.214 0.524*	0.262	0.214

TABLE	MILCON L	SOW DATE MILCON E	SOW DATE MILCON M	MILCON E MILCON M
SED	0.214	0.371	0.303	0.371

TABLE	SOW DATE MILCON L	MILCON E MILCON L	MILCON M MILCON L	SOW DATE INSCTCDE
SED	0.303	0.371	0.303	0.742

TABLE	SOW DATE MILCON E MILCON L	SOW DATE MILCON M MILCON L	MILCON E MILCON M MILCON L	SOW DATE MILCON E MILCON M
SED	0.524	0.428	0.524	0.524

TABLE	SOW DATE MILCON E MILCON M MILCON L
SED	0.742

* FOR MARGIN OF INSCTCDE.SOW DATE TABLE ONLY

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

STRATUM	DF	SE	CV%
BLOCK.WP	27	0.742	7.3
GRAIN MEAN DM%	82.7		
PLOT AREA HARVESTED	0.00130		