ROTHAMSTED RESEARCH

Yields of the Field Experiments 1980

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80/R/WW/4 Winter Wheat Seed and Divided N Dressings

Rothamsted Research

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80/R/WW/4

WINTER WHEAT

SEED RATES AND DIVIDED N DRESSINGS

Object: To study the effects of a range of rates of early nitrogen dressings on the growth and yield of w. wheat sown at half or standard seed rate - Gt. Knott III.

Sponsors: J. McEwen, R. Moffitt.

Design: 2 randomised blocks of 24 plots.

Whole plot dimensions: 4.27 x 8.08.

Treatments: All combinations of:-

1. SEEDRATE Seed rates (kg):

   100
   200

2. EARLY N Nitrogen fertiliser applied 4 Mar, 1980 (kg N):

    0
   25
   50
   75

3. APRIL N Nitrogen fertiliser applied 14 Apr (kg N):

    75
   100
   125

Basal applications: Manures: (0:20:20) at 310 kg. Weedkillers: Paraquat at 0.56 kg ion in 220 l. Methabenzthiazuron at 1.5 kg in 220 l. Isoproturon at 2.9 kg in 250 l. Fungicide: Triadimefon at 0.13 kg in 250 l. Insecticide: Demeton-s-methyl at 0.24 kg in 250 l. Growth regulator: Chlormequat at 1.7 l in 250 l.

Seed: Flanders.

Cultivations, etc.:- Heavy spring-tine cultivated twice: 24 Sept, 1979. Paraquat applied: 15 Oct. PK applied, spring-tine cultivated, seed sown: 22 Oct. Methabenzthiazuron applied: 24 Oct. Isoproturon applied: 24 Apr, 1980. Growth regulator applied: 7 May. Fungicide applied: 3 June. Insecticide applied: 23 June. Combine harvested: 22 Aug. Previous crops: S. barley 1978, s. oats 1979.

NOTES: (1) Plant counts were made in January, tiller counts in April and ear counts in July.
(2) 1000 grain weights and N content of grain were measured.

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GRAIN TONNES/HECTARE

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

EARLY N	0	25	50	75	MEAN
SEEDRATE					
100	6.66	7.32	7.94	7.83	7.44
200	7.22	7.36	7.80	7.86	7.56
MEAN	6.94	7.34	7.87	7.85	7.50

APRIL N	75	100	125	MEAN
SEEDRATE				
100	7.29	7.38	7.64	7.44
200	7.13	7.68	7.87	7.56
MEAN	7.21	7.53	7.76	7.50

APRIL N	75	100	125	MEAN
EARLY N				
0	6.56	6.96	7.31	6.94
25	6.87	7.46	7.69	7.34
50	7.65	8.10	7.85	7.87
75	7.77	7.59	8.18	7.85
MEAN	7.21	7.53	7.76	7.50

	APRIL N	75	100	125
SEEDRATE	EARLY N			
100	0	6.22	6.67	7.10
	25	7.12	7.36	7.47
	50	8.05	7.94	7.84
	75	7.77	7.56	8.16
200	0	6.90	7.25	7.51
	25	6.62	7.57	7.90
	50	7.25	8.27	7.86
	75	7.77	7.62	8.20

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

TABLE	SEEDRATE	EARLY N	APRIL N	SEEDRATE EARLY N
SED	0.089	0.126	0.109	0.178

TABLE	SEEDRATE APRIL N	EARLY N APRIL N	SEEDRATE EARLY N APRIL N
SED	0.154	0.218	0.308

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

STRATUM	DF	SE	CV%
BLOCK.WP	23	0.308	4.1

GRAIN MEAN DM% 84.0 PLOT AREA HARVESTED 0.00246

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