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## Yields of the Field Experiments 1972

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### 72/R/WW/3 Winter Wheat Weedkiller, Aqueous N and Fungicide

#### Rothamsted Research

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72/R/WW/3

WINTER WHEAT

WEEDKILLER, AQUEOUS N AND FUNGICIDE

Object: To study the effects of combined sprays of liquid nitrogen fertiliser, hormone weedkiller and fungicide on foliar scorch and yield of winter wheat - Whittlocks.

Sponsors: S.C.R. Freeman, A. Penny.

Design: 4 randomised blocks of 21 plots.

Whole plot dimensions: 2.13 x 2.74. Area harvested: 0.00264.

Treatments: All combinations of:-

1. Forms of nitrogen: Solid as 'Nitro-Chalk' (S) (21% N) applied immediately after weedkiller and fungicide, liquid as urea/ammonium nitrate (26% N) mixed with the weedkiller and fungicide where appropriate.

2. Nitrogen: 56.5, 113 kg N.

3. Weedkiller (dichlorprop/MCPA) (H): None, 2.8 kg total a.e.

4. Fungicide (F): None (O), tridemorph at 0.53 kg (T)

together with 5 extra treatments:-

SN1E H TO, SN2E H TO, SN1E H TE, SN2E H TE, SN2 H TL,

(N1 = 56.5, N2 = 113.0 kg N, H = H at 2.8 kg)

where 'Nitro-Chalk' and tridemorph were applied early (E), and tridemorph was applied late (L).

Basal applications: 280 kg (0:20:20) combine drilled.

Seed: Joss Cambier dressed dieldrin, sown at 200 kg.

Cultivations, etc.: Deep-tine cultivated twice: 28 Oct, 1971. Seed combine drilled: 29 Oct. N and tridemorph applied to E plots: 17 Apr, 1972. Remaining N and tridemorph treatments and weedkiller applied: 11 May. Cut by sickle: 30 Aug. Previous crops: Fallow 1970, potatoes 1971.

NOTE: Estimates were made of infection by mildew (*Erysiphe graminis*). Grain samples were taken for determinations of dry matter and % N.

Standard error per plot.

Grain, tonnes/hectare: 0.375 or 6.9% (60 d.f.)

72/R/WW/3

TABLES OF MEANS

GRAIN: TONNES/HECTARE

	N: KG/HA		H: KG/HA		F: KG/HA		Mean
	56.5	113.0	0	2.8	0	0.53	
FORM							
Solid	5.56	5.30	5.41	5.45	5.39	5.47	5.43
Liquid	5.30	5.22	5.19	5.34	5.42	5.11	5.26
	N: KG/HA		H: KG/HA		F: KG/HA		
	56.5	113.0	5.36	5.51	5.52	5.35	5.43
			5.24	5.27	5.29	5.23	5.26
			H: KG/HA				
			0	2.8	5.32	5.28	5.30
					5.49	5.30	5.39
Mean					5.40	5.29	5.35

EXTRA

SN1E H TO SN2 H TO SN1E H TE SN2 H TE SN2 H TL

5.79 5.54 5.86 5.30 5.45

STANDARD ERRORS OF DIFFERENCES

ALL MARGINAL MEANS ALL 2-FACTOR TABLES EXTRA

0.094 0.133 0.265

Grand mean: 5.40

Mean D.M. %: 84.9



72/R/WW/3

STRAW (FRESH): TONNES/HECTARE

	N: KG/HA		H: KG/HA		F: KG/HA		Mean
	56.5	113.0	0	2.8	00	0.53	
FORM							
Solid	9.81	9.40	9.87	9.34	9.54	9.67	9.60
Liquid	9.27	9.27	9.63	8.91	9.49	9.06	9.27
	N: KG/HA						
	56.5		9.94	9.15	9.50	9.58	9.54
	113.0		9.56	9.11	9.53	9.14	9.34
			H: KG/HA				
			0		9.82	9.69	9.75
			2.8		9.21	9.04	9.13
Mean					9.51	9.36	9.44

EXTRA

SN1E H TO SN2 H TO SN1E H TE SN2E H TE SN2 H TL

10.89 10.61 11.08 11.17 9.29

Grand mean: 9.72