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70/R/B/8 Barley Weedkiller and Aqueous Nitrogen

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BARLEY

(70/R/E/8)

Weedkiller and aqueous nitrogen, Great Knott I 1970.

Design: 4 randomised blocks of 28 plots.

Area of each plot: 0.0007. Area harvested: 0.0005.

Treatments: All combinations of:-

1. Weedkiller (dichlorprop/MCPA): None (H0), 20 (H1), 40 (H2), 60 (H3) oz total a.e.,
2. Forms of nitrogen: Solid, as 'Nitro-Chalk' (21% N) applied immediately after the weedkiller (S), liquid as urea/ammonium nitrate (26% N) mixed with the weedkiller (L),
3. Levels of nitrogen: 0.3 (N1), 0.6 (N2), 0.9 (N3) cwt N, together with 4 additional treatments

SN2 E H0, SN2 E H1, SN2 E H2, SN2 E H3,

where 'Nitro-Chalk' was applied early (E) and the H0 plots were hand weeded.

NOTE: The weedkiller was applied in 28 gals where solid fertiliser was used. The liquid fertiliser (with or without weedkiller) was applied as a spray at 11, 22 and 33 gals for rates 1, 2 and 3 respectively.

Basal application: 280 lb (0:20:20) broadcast.

Cultivations, etc.: Ploughed: 17 Oct - 4 Nov, 1969. Seed drilled at 120 lb and basal PK applied: 2 Apr, 1970. N applied to E plots: 14 May. Remaining N treatments and weedkiller applied: 28 May. Hand weed H0 plots: 26 June. Cut by sickle: 24 Aug. Variety: Julia. Previous crops: Fallow 1968, winter wheat 1969.

NOTE: Soil samples were taken in May for pH and the site reviewed for weed species. Plots were scored for scorch and weed control and examined for bird damage and ear deformities. Weeds were identified on the H0 plots. At harvest weeds on certain plots were identified and their dry matter determined. The percentage of N in grain was determined.

Standard error per plot:

Grain, cwt: 2.76 or 12.0% (69 d.f.)

70/R/B/8

SUMMARY OF RESULTS

GRAIN: CWT

	H0	H1	H2	H3	Mean
	(±0.80)				(±0.40)
S	24.3	22.1	23.7	22.4	23.1
L	21.9	22.5	23.3	23.5	22.8
	(±0.98)				(±0.49)
N1	20.3	20.7	22.2	19.9	20.8
N2	23.7	23.0	23.5	23.5	23.4
N3	25.4	23.2	24.8	25.4	24.7
Mean (±0.56)	23.1	22.3	23.5	22.9	23.0
	N1	N2	N3		
	(±0.69)				
S	21.3	23.7	24.3		
L	20.2	23.1	25.0		

SN2 E H0 23.7
 SN2 E H1 24.3 (±1.38)
 SN2 E H2 25.9
 SN2 E H3 25.4

General mean: 23.2

Mean D.M. %: 81.6