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Numerical Results of the Field Experiments 1969

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69/R&W/B/3 - Deep-drilled Urea & 'nitro-chalk' - Barley

Rothamsted Research

Rothamsted Research (1970) *69/R&W/B/3 - Deep-drilled Urea & 'nitro-chalk' - Barley* ; Numerical Results Of The Field Experiments 1969, pp 263 - 264 - **DOI:**

<https://doi.org/10.23637/ERADOC-1-96>

BARLEY

(69/R/B/3 and 69/W/B/3)

Deeply drilled urea and 'Nitro-Chalk' Rothamsted (R) Pastures and Woburn (W) Stackyard A1, 1969.

Design: 4 blocks of 8 plots (randomisation restricted) plus 1 nil plot per block.

Area of each plot: 0.0161. Area harvested: 0.0107.

Treatments: No nitrogen (N0) and all combinations of:

1. Form of nitrogen: 'Nitro-Chalk' (C), urea (U).
2. Method of application: Injected by 'Tume' drill 3-4 inches deep in rows 5.5 inches apart (I), broadcast (B).
3. Nitrogen: 0.5 (N1), 1.0 (N2) cwt N.

Basal applications: 265 lb (0:20:20) combine drilled.

Weedkillers:-

Pastures (R): Paraquat at 0.5 lb ion in 25 gals 2,4-D at 8 oz and dichlorprop at 32 oz in 20 gals.

Stackyard A1 (W): Ioxynil octanoate, bromoxynil octanoate and the iso-octyl ester of dichlorprop ('Oxytril P' at 1 pint in 25 gals).

Cultivations, etc.:

Pastures (R): Paraquat applied: 11 Oct, 1968. Ploughed: 13 Nov.

Urea and 'Nitro-Chalk' injected by 'Tume' drill: 28 Mar, 1969.

Seed drilled at 145 lb, urea and 'Nitro-Chalk' broadcast:

29 Mar. 2,4-D/dichlorprop applied: 13 May. Combine harvested:

18 Aug. Variety: Zephyr. Previous crops: Potatoes 1967, barley 1968.

Stackyard A1 (W): Ploughed: 14 Aug, 1968. Ploughed second time:

15 Nov. Treatments applied, seed drilled at 145 lb: 3 Apr,

1969. Weedkiller applied: 16 May. Combine harvested: 8 Aug.

Variety: Zephyr. Previous crops: Fallow 1967, 1968.

NOTES: (1) The 'Tume' drill was used on all plots to prepare the seedbed, it being drawn idle through the B and N0 plots.

(2) Percentage of N in grain was determined.

Standard errors per plot: Grain, cwt:

Pastures (R): 2.04 or 4.3% (21 d.f.)

Stackyard A1 (W): 4.53 or 13.7% (21 d.f.)

SUMMARY OF RESULTS

GRAIN, CWT

	I	B	N1	N2	Mean
	PASTURES (R)				
	(±0.72)				(±0.51)
C	48.0	46.3	47.5	46.8	47.1
U	47.9	47.4	48.8	46.6	47.7
	(±0.72)				(±0.51)
		I	48.6	47.3	48.0
		B	47.6	46.1	46.8
Mean (±0.51)			48.1	46.7	47.4
NO	36.4				
General mean:	46.2				

STACKYARD A1 (W)

	(±1.60)				(±1.13)
C	34.0	32.4	30.6	35.9	33.2
U	32.7	32.8	31.9	33.6	32.7
	(±1.60)				(±1.13)
		I	32.4	34.3	33.4
		B	30.1	35.1	32.6
Mean (±1.13)			31.3	34.7	33.0
NO	10.0				
General mean:	30.9				

Mean D.M. %: Pastures (R): 79.6
 Stackyard A1 (W): 88.3