

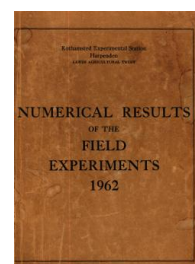
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62/R/DA/2 Winter Wheat - Azotobacter Inoculation and N

Rothamsted Research

Rothamsted Research (1963) *62/R/DA/2 Winter Wheat - Azotobacter Inoculation and N* ; Yields Of The Field Experiments 1962, pp 125 - 125 - DOI: <https://doi.org/10.23637/ERADOC-1-164>

WINTER WHEAT

Effects of nitrogen and inoculation with Azotobacter - Long Hoos IV 1962.

Design: 4 randomised blocks of 4 plots each.

Area of each plot: 0.0106 acres.

Treatments. All combinations of:-

- Nitrogen: None; 0.6 cwt N per acre applied as 'Nitro-Chalk'
- Azotobacter inoculation: None (sterile medium, no carbon source);
- Azotobacter culture applied to seed.

Basal dressing: 480 lb compound fertiliser (20% P₂O₅, 20% K₂O) per acre combine drilled.

Cultivations, etc.: Ploughed: Sept 13, 1961. Seed drilled at 2 $\frac{3}{4}$ bushels per acre: Oct 18. Appropriate plots re-inoculated with culture at base of seedlings, seed inoculation having failed: Dec 13. 'Nitro-Chalk' applied: Apr 6, 1962. Sprayed with CMFP at 6 pints in 40 gallons per acre: Apr 24. Combine harvested: Sept 8. Variety: Cappelle. Previous crops: Clover 1960; spring beans 1961.

Note: Crop samples were taken throughout the season for counts of Azotobacter. Measurements of the height of the crop were made in May and June.

Standard error per plot.

Grain (at 85% dry matter): 1.55 cwt per acre or 4.0% (9 d.f.)

Summary of Results

Grain (at 85% dry matter): cwt per acre

Inoculation	N: cwt per acre		Mean
	None	0.6	
	(±0.78)		(±0.54)
None	31.6	45.8	38.7
<u>Azotobacter</u>	31.9	47.2	39.6
Mean (±0.54)	31.8	46.5	39.1

Mean dry matter % as harvested: 80.5