

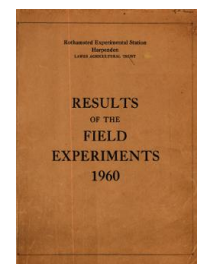
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Yields of the Field Experiments 1960

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60/R/CA/6 Spring Wheat - Forms and Application of N

Rothamsted Research

Rothamsted Research (1961) *60/R/CA/6 Spring Wheat - Forms and Application of N* ; Yields Of The Field Experiments 1960, pp 92 - 93 - DOI: <https://doi.org/10.23637/ERADOC-1-180>

60/Ca/6.1

SPRING WHEAT

Forms of N and methods of application - Little Knott I 1960.

Design: $4 \times 2 \times 4$ in 6 blocks of 16, with certain high order interactions partially confounded with block differences, plus 2 control plots per block.

Area of each plot: 0.0097 acres.

Treatments: No nitrogen and all combinations of:-

| | | |
|--------------------------------------|---------|-----|
| <u>Forms of N:</u> Ammonium sulphate | 21% N | (S) |
| Calcium nitrate | 15.5% N | (C) |
| Ammonium nitrate | 23% N | (A) |
| or Urea | 45.6% N | (U) |

Levels of N: 0.4; 0.8 cwt N per acre.

Methods of application: Broadcast (B), combine drilled (D), side band placed (P), top dressed (T).

Basal dressing: 2 cwt granular compound fertiliser (14% P_2O_5 , 28% K_2O) per acre cross drilled.

Cultivations, etc.: Ploughed: Nov 11, 1959. Ground chalk applied at 23 cwt per acre: Feb 24 - Mar 2, 1960. Seed drilled at 3 bushels per acre and seedbed fertilisers applied: Mar 22. Nitrogen top dressings applied: May 2. Sprayed with TCB/MCPA at 4 pints in 40 gallons per acre: May 10. Combine harvested: Sept 13. Variety: Jufy II Previous crop: Oats.

Standard error per plot.

Grain (at 85% dry matter): 2.01 cwt per acre or 5.8% (67 d.f.)

60/Ca/6.2

Summary of Results

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

| | Form of N | | | | Mean |
|-----------------------|-----------|------|------|------|---------------------|
| | S | C | A | U | |
| Mean (± 0.41) | 34.6 | 36.0 | 35.4 | 35.4 | 35.4 (± 0.21) |
| N: cwt per acre | | | | | |
| 0.4 (± 0.58) | 33.8 | 35.3 | 34.4 | 34.9 | 34.6 |
| 0.8 | 35.3 | 36.8 | 36.4 | 35.9 | 36.1 |
| Diff. (± 0.82) | +1.5 | +1.5 | +2.0 | +1.0 | +1.5 (± 0.41) |
| Method of application | | | | | |
| B | 34.0 | 34.2 | 34.1 | 35.2 | 34.4 |
| D (± 0.82) | 34.5 | 36.4 | 36.2 | 35.9 | 35.7 (± 0.41) |
| P | 36.3 | 37.5 | 35.4 | 34.9 | 36.0 |
| T | 33.4 | 36.0 | 36.0 | 35.8 | 35.3 |

| | Method of application | | | |
|----------------------|-----------------------|------|------|------|
| | B | D | P | T |
| N: cwt per acre | | | | |
| 0.4 (± 0.58) | 33.1 | 35.3 | 35.4 | 34.6 |
| 0.8 | 35.6 | 36.2 | 36.7 | 36.0 |
| Diff. (± 0.82) | +2.5 | +0.9 | +1.3 | +1.4 |

Control: 29.9 (± 0.58)

General Mean 34.8

Mean dry matter % as harvested (all plots): 84.4

Form of N

S = Ammonium sulphate 21% N

C = Calcium nitrate 15.5% N

A = Ammonium nitrate 23% N

U = Urea 45.6% N

Method of application

B = Broadcast

D = Combine drilled

P = Side band placed

T = Top dressed