

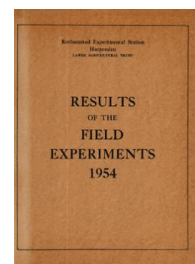
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Yields of the Field Experiments 1954

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54/R/CE/1 Lucerne - Fertilizer Placement

Rothamsted Research

Rothamsted Research (1955) *54/R/CE/1 Lucerne - Fertilizer Placement* ; Yields Of The Field Experiments 1954, pp 89 - 91 - DOI: <https://doi.org/10.23637/ERADOC-1-184>

54/Ce/1.1

LUCERNE

Fertilizer placement and potash top dressings - Highfield, 5 1954 - the 3rd year.

System of replication: 8 randomised blocks of 8 plots each, a high order interaction being confounded with block differences. After first cut, plots split into two for potash top dressing.

Area of each plot: 0.0136 acre. Area of each sub plot: 0.0068 acre.

Treatments, applied 1952: All combinations of:-

P₂O₅: None; 1.0 cwt per acre applied as superphosphate.

K₂O: None; 1.0 cwt per acre applied as muriate of potash.

Method of placement: Broadcast on seedbed; Ploughed in 10".

Starter: None; 2 cwt granular superphosphate per acre placed beneath seed.

Applied 1954 to sub plots (after 1st cut):-

None; 1.0 cwt K₂O per acre as muriate of potash.

Basal dressing: None.

Cultivations, etc.: 1st cut: June 8. Applied potash top dressing: June 18. 2nd cut: Aug 15. 3rd cut: Nov 3.

Standard errors per plot. Dry Matter:

| | | |
|------------------------------|----------------------------|-----------|
| 1st cut, whole plot: | 2.89 cwt per acre or 12.6% | (42 d.f.) |
| 2nd cut, whole plot: | 2.10 cwt per acre or 10.1% | (42 d.f.) |
| 2nd cut, sub plot: | 2.18 cwt per acre or 10.5% | (48 d.f.) |
| 3rd cut, whole plot: | 1.19 cwt per acre or 20.2% | (42 d.f.) |
| 3rd cut, sub plot: | 0.83 cwt per acre or 14.1% | (48 d.f.) |
| Total of 3 cuts, whole plot: | 4.35 cwt per acre or 8.8% | (42 d.f.) |

Note: For previous year's results see 53/Cg/1 and 52/Cf/1.

54/Ce/1.2

Summary of Results

Dry Matter: cwt per acre

Treatments applied 1952

| | No ferti- lizer | Superphosphate | | Muriate of Potash | | Superphosphate and Muriate of Potash | | Mean |
|---|-----------------------------|----------------|----------------|-----------------------------|----------------|--|----------------|---------------------|
| | | Broad- cast | Ploughed in | Broad- cast | Ploughed in | Broad- cast | Ploughed in | |
| 1st cut | | | | | | | | |
| Mean (± 1.02) | 21.8 ⁽¹⁾ | 22.2 | 21.8 | 23.4 | 23.5 | 24.3 | 24.3 | 22.9 |
| Starter None | (± 1.02) 21.3 | 22.7 | 19.8 | (± 1.44) 25.1 | 23.3 | 24.0 | 24.7 | 22.8 |
| Super | 22.3 | 21.7 | 23.9 | 21.7 | 23.7 | 24.6 | 23.9 | 23.0 |
| Difference (± 2.04) | +1.0 ⁽²⁾ | -1.0 | +4.1 | -3.4 | +0.4 | +0.6 | -0.8 | +0.2 ⁽¹⁾ |
| | | | (1) ± 0.72 | | | | | |
| | | | (2) ± 1.44 | | | | | |
| 2nd cut | | | | | | | | |
| Mean (± 0.74) | 20.2 ⁽¹⁾ | 18.7 | 19.0 | 22.8 | 21.5 | 22.8 | 21.2 | 20.8 |
| Starter None | (± 0.74) 20.1 | 19.6 | 20.5 | (± 1.05) 22.0 | 22.0 | 21.9 | 21.0 | 20.9 |
| Super | 20.3 | 17.8 | 17.5 | 23.6 | 20.9 | 23.7 | 21.3 | 20.7 |
| Difference (± 1.49) | +0.2 ⁽²⁾ | -1.8 | -3.0 | +1.6 | -1.1 | +1.8 | +0.3 | -0.2 ⁽¹⁾ |
| K ₂ O ⁺ : cwt per acre | (± 0.65) [*] | | | (± 0.92) [*] | | | | |
| None | 19.0 | 16.6 | 18.9 | 20.1 | 20.2 | 21.5 | 19.7 | 19.4 |
| 1.0 | 21.5 | 20.9 | 19.1 | 25.5 | 22.8 | 24.1 | 22.6 | 22.2 |
| Difference (± 1.09) | +2.5 ⁽³⁾ | +4.3 | +0.2 | +5.4 | +2.6 | +2.6 | +2.9 | +2.8 ⁽⁴⁾ |
| | | | (1) ± 0.53 | (3) ± 0.77 | | | | |
| | | | (2) ± 1.05 | (4) ± 0.38 | | | | |

* for use in comparisons other than vertical.

+ applied June 1954.

54/Oe/1.3

Dry Matter: cwt per acre
Treatments applied 1952

| | No ferti- lizer | Superphosphate | | Muriate of Potash | | Superphosphate and Muriate of Potash | | Mean |
|---|-----------------------|----------------|----------------|----------------------|----------------|--|----------------|---------------------|
| | | Broad- cast | Ploughed in | Broad- cast | Ploughed in | Broad- cast | Ploughed in | |
| 3rd cut | | | | | | | | |
| Mean (±0.42) | 5.2 ⁽¹⁾ | 4.7 | 5.4 | 7.0 | 6.6 | 6.3 | 6.8 | 5.9 |
| Starter | (±0.42) | | | (±0.60) | | | | |
| None | 4.9 | 5.4 | 5.3 | 6.0 | 6.3 | 6.2 | 7.0 | 5.8 |
| Super | 5.4 | 4.0 | 5.5 | 8.1 | 6.8 | 6.4 | 6.5 | 6.0 |
| Difference (±0.84) | +0.5 ⁽²⁾ | -1.4 | +0.2 | +2.1 | +0.5 | +0.2 | -0.5 | +0.2 ⁽¹⁾ |
| K ₂ O ⁺ : cwt per acre | (±0.33) [*] | | | (±0.47) [*] | | | | |
| None | 4.2 | 3.2 | 4.6 | 6.1 | 5.2 | 5.3 | 5.9 | 4.8 |
| 1.0 | 6.2 | 6.1 | 6.2 | 8.0 | 8.0 | 7.3 | 7.7 | 7.0 |
| Difference (±0.42) | +2.0 ⁽³⁾ | +2.9 | +1.6 | +1.9 | +2.8 | +2.0 | +1.8 | +2.2 ⁽⁴⁾ |
| | | | | (1) ±0.30 | (3) ±0.29 | | | |
| | | | | (2) ±0.60 | (4) ±0.15 | | | |
| Total of 3 cuts | | | | | | | | |
| Mean (±1.54) | 47.2 ⁽¹⁾ | 45.6 | 46.3 | 53.2 | 51.6 | 53.4 | 52.2 | 49.6 |
| Starter | (±1.54) | | | (±2.18) | | | | |
| None | 46.3 | 47.7 | 45.6 | 53.1 | 51.7 | 52.2 | 52.8 | 49.5 |
| Super | 48.1 | 43.5 | 46.9 | 53.4 | 51.4 | 54.7 | 51.7 | 49.7 |
| Difference (±3.08) | +1.8 ⁽²⁾ | -4.2 | +1.3 | +0.3 | -0.3 | +2.5 | -1.1 | +0.2 ⁽¹⁾ |
| | | | | (1) ±1.09 | | | | |
| | | | | (2) ±2.18 | | | | |

^{*}for use in comparisons other than vertical

⁺applied June 1954.