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69/R/RN/7 - Residual Phosphate Rotation - Potatoes, Barley & Swedes

Rothamsted Research

Rothamsted Research (1970) *69/R/RN/7 - Residual Phosphate Rotation - Potatoes, Barley & Swedes ; Numerical Results Of The Field Experiments 1969*, pp 86 - 88 - DOI:

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

RESIDUAL PHOSPHATE ROTATION

(69/R/RN/7)

The long term and residual effects of phosphate fertilisers - Great Field IV and Sawyers I, the 10th year. For treatments and previous years' results see 'Details' 1967 and 'Results' 67/B/6 and 68/B/5.

Area of each plot:

Great Field IV: 0.0193.

Sawyers I: 0.0212.

Area harvested: Potatoes and barley: 0.0129. Swedes: 0.0096.

Area harvested: Potatoes and barley: 0.0141. Swedes: 0.0106.

Standard applications: Manures as previously. Weedkillers: Potatoes: Paraquat at 0.375 lb ion plus linuron at 0.75 lb ion in 37 gals. Fungicide: Mancozeb at 1.2 lb in 37 gals on 3 occasions. Insecticide: Demeton-s-methyl at 3.5 oz applied with second spraying with mancozeb. Haulm destroyer: Undiluted BOV at 15 gals. Barley: Weedkiller: 2,4-D at 8 oz and dichlorprop at 32 oz in 20 gals.

Cultivations, etc. (both fields): Ploughed: 21 Nov, 1968. Potatoes: Fertilisers applied: 14 Apr, 1969. Plots rotary cultivated, potatoes planted: 16 Apr. Paraquat and linuron applied: 13 May. Grubbed: 19 June. Rotary ridged: 25 June. Mancozeb applied: 15 July, 4 Aug, 21 Aug. Insecticide applied: 4 Aug. BOV applied: 4 Sept. Lifted: 23 Sept. Barley: Ground chalk applied at 23 cwt: 12 Nov, 1968. Fertilisers applied: 11 Mar, 1969. Seed drilled at 140 lb: 25 Mar. Weedkiller applied: 20 May. Combine harvested: 22 Aug. Swedes: Fertilisers applied: 29 Apr, 1969. Seed drilled at 1.25 lb: 14 May. Singled: 25 June. Lifted: 21 Oct.

Standard errors per plot.

Sawyers I:

| | |
|-------------------------------|--------------------------|
| Potatoes, total tubers, tons: | 0.425 or 3.6% (11 d.f.) |
| Barley, grain, cwt: | 2.17 or 5.2% (11 d.f.) |
| Swedes, fresh weight, tons: | 1.059 or 10.2% (11 d.f.) |

SUMMARY OF RESULTS

POTATOES

| Treatment | TOTAL TUBERS: TONS | | % WARE | |
|-----------|------------------------|-------------------|------------------------|-------------------|
| | Great Field IV Mean | Sawyers I Mean | Great Field IV Mean | Sawyers I Mean |
| | | (±0.301) | | |
| O | 12.84 | 9.28 | 97.2 | 95.3 |
| A1 | 14.68 | 11.03 | 96.6 | 94.9 |
| A2 | 15.10 | 11.96 | 97.0 | 95.7 |
| A3 | 16.28 | 12.50 | 96.8 | 95.2 |
| A4 | 15.75 | 12.74 | 94.9 | 94.3 |
| T1 | 15.79 | 12.08 | 96.4 | 95.2 |
| T2 | 16.25 | 12.60 | 95.0 | 94.8 |
| R2 | 14.82 | 11.51 | 97.1 | 96.5 |
| R3 | 15.59 | 12.49 | 97.1 | 95.1 |
| R4 | 15.74 | 12.76 | 95.1 | 94.7 |
| G1 | 14.24 | 10.38 | 97.8 | 95.5 |
| S1 | 13.71 | 10.81 | 96.6 | 95.1 |
| Mean | 15.07 | 11.68 | 96.5 | 95.2 |

BARLEY

| | GRAIN: CWT | | STRAW: CWT | |
|--------------|------------|------|------------|------|
| | | | (±1.53) | |
| O | 30.1 | 39.1 | 27.3 | 28.5 |
| A1 | 37.2 | 42.2 | 31.9 | 35.0 |
| A2 | 31.4 | 44.7 | 33.9 | 34.7 |
| A3 | 33.8 | 42.9 | 30.8 | 38.2 |
| A4 | 34.9 | 42.3 | 28.0 | 34.3 |
| T1 | 32.8 | 43.3 | 35.3 | 35.8 |
| T2 | 40.1 | 43.0 | 35.0 | 34.8 |
| R2 | 36.5 | 41.9 | 36.4 | 36.3 |
| R3 | 33.5 | 44.3 | 46.0 | 37.3 |
| R4 | 35.9 | 42.7 | 34.3 | 37.4 |
| G1 | 31.7 | 40.1 | 28.3 | 30.5 |
| S1 | 31.8 | 39.0 | 29.0 | 27.9 |
| Mean | 34.1 | 42.1 | 33.0 | 34.2 |
| Mean D.M. %: | 80.4 | 83.8 | 88.6 | 91.6 |

SWEDES, ROOTS: TONS

| Treat- ment | Great Field IV Mean | Sawyers I Mean |
|----------------|------------------------|-------------------|
| | | (±0.749) |
| O | 5.70 | 2.78 |
| A1 | 10.93 | 8.97 |
| A2 | 16.67 | 12.06 |
| A3 | 17.64 | 13.72 |
| A4 | 15.56 | 14.44 |
| T1 | 14.72 | 11.98 |
| T2 | 16.48 | 11.83 |
| R2 | 15.46 | 10.99 |
| R3 | 16.58 | 12.00 |
| R4 | 16.07 | 13.26 |
| G1 | 10.00 | 5.24 |
| S1 | 10.37 | 7.26 |
| Mean | 13.85 | 10.38 |