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64/R/RP/B/7 Residual Phosphate Rotation

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64/B/7.1

RESIDUAL PHOSPHATE ROTATION

(RP)

The long term and residual effects of a number of phosphate fertilisers compared with superphosphate - Great Field IV and Sawyers I 1964, the fifth year.

For treatments and rotation, etc. see 'Results', 63/B/8 and for previous years' results see 60/B/9, 61/B/8, 62/B/8 and 63/B/8.

Area of each plot:

Great Field IV: 0.0193. Area harvested: Potatoes and barley
- 0.0129, swedes - 0.0096.
Sawyers I: 0.0212. Area harvested: Potatoes and barley
- 0.0141, swedes - 0.0106.

Cultivations, etc. (both fields, except as indicated): Ploughed:

Great Field IV - Dec 9, 1963. Sawyers I - Jan 3, 1964.

Potatoes: Ground chalk applied to Great Field IV at 23 cwt: Dec 9, 1963.

Fertilisers applied, potatoes planted: May 4, 1964. Sprayed with diquat/paraquat (Preeglon Extra at 2 pints in 40 gals): May 19.

Earthed up: June 22. Sprayed twice with mancozeb at 1.2 lb in 35 gals: July 1 and Aug 6. Sprayed with diquat (Reglone at 3 pints in 40 gals): Sept 17. Lifted: Sept 23.

Barley: Ground chalk applied at 23 cwt: Dec 9, 1963. Fertilisers applied, seed drilled at 2 bushels: Feb 13, 1964. Sprayed with mecoprop/2,4-D (Methoxone Extra at 6 pints in 40 gals): May 15. Combine harvested: Aug 20.

Swedes: Ground chalk applied at 23 cwt: Dec 9, 1963. Fertilisers applied: May 19, 1964. Seed drilled at 2 lb: May 21. Singled: July 2. Lifted: Oct 13.

Standard errors per plot.

Sawyers I.

Potatoes, Total tubers: 0.465 or 5.4% (11 d.f.)

Barley, Grain: 1.97 or 4.4% (11 d.f.)

Swedes, Roots: 1.356 or 15.1% (11 d.f.)

64/B/7.2

SUMMARY OF RESULTS

| Treatment | POTATOES | | | | | | | |
|-----------|------------------------|----------------------|-------------------|-----------------------|------------------------|----------------------|-------------------|-----------------------|
| | TOTAL TUBERS: | | | | PERCENTAGE WARE | | | |
| | Great Field IV Mean | Field IV Increase | Sawyers I Mean | Sawyers I Increase | Great Field IV Mean | Field IV Increase | Sawyers I Mean | Sawyers I Increase |
| | | | (±0.329)(±0.465) | | | | | |
| 1 | 8.46 | | 8.66 | | 96.7 | | 97.0 | |
| 2 | 9.54 | +1.08 | 9.05 | +0.39 | 94.7 | -2.0 | 95.0 | -2.0 |
| 3 | 10.44 | +1.98 | 9.53 | +0.87 | 95.6 | -1.1 | 95.1 | -1.9 |
| 4 | 9.34 | +0.88 | 8.41 | -0.25 | 97.1 | +0.4 | 96.9 | -0.1 |
| 5 | 7.93 | -0.53 | 8.60 | -0.06 | 93.8 | -2.9 | 94.9 | -2.1 |
| 6 | 8.84 | +0.38 | 8.91 | +0.25 | 95.5 | -1.2 | 95.7 | -1.3 |
| 7 | 9.75 | +1.29 | 8.57 | -0.09 | 96.9 | +0.2 | 95.8 | -1.2 |
| 8 | 8.51 | +0.05 | 8.35 | -0.31 | 95.3 | -1.4 | 95.6 | -1.4 |
| 9 | 9.02 | +0.56 | 7.68 | -0.98 | 95.8 | -0.9 | 95.5 | -1.5 |
| 10 | 8.25 | -0.21 | 8.45 | -0.21 | 96.5 | -0.2 | 95.0 | -2.0 |
| 11 | 8.70 | +0.24 | 8.72 | +0.06 | 97.7 | +1.0 | 95.7 | -1.3 |
| 12 | 9.74 | +1.28 | 8.58 | -0.08 | 96.4 | -0.3 | 95.0 | -2.0 |
| Mean | 9.04 | | 8.63 | | 96.0 | | 95.6 | |

| | BARLEY | | | | | | | |
|-------------|------------------------|----------------------|-------------------|-----------------------|------------------------|----------------------|-------------------|-----------------------|
| | GRAIN | | | | STRAW | | | |
| | Great Field IV Mean | Field IV Increase | Sawyers I Mean | Sawyers I Increase | Great Field IV Mean | Field IV Increase | Sawyers I Mean | Sawyers I Increase |
| | | | (±1.39)(±1.97) | | | | | |
| 1 | 40.4 | | 41.7 | | 24.3 | | 26.3 | |
| 2 | 37.2 | -3.2 | 46.2 | +4.5 | 27.0 | +2.7 | 25.6 | -0.7 |
| 3 | 36.6 | -3.8 | 42.9 | +1.2 | 24.4 | +0.1 | 24.3 | -2.0 |
| 4 | 37.7 | -2.7 | 43.8 | +2.1 | 27.3 | +3.0 | 25.5 | -0.8 |
| 5 | 33.2 | -7.2 | 43.9 | +2.2 | 25.1 | +0.8 | 24.9 | -1.4 |
| 6 | 37.8 | -2.6 | 46.3 | +4.6 | 25.5 | +1.2 | 26.6 | +0.3 |
| 7 | 38.6 | -1.8 | 44.2 | +2.5 | 28.1 | +3.8 | 26.2 | -0.1 |
| 8 | 37.6 | -2.8 | 46.5 | +4.8 | 25.8 | +1.5 | 26.4 | +0.1 |
| 9 | 40.9 | +0.5 | 45.3 | +3.6 | 25.9 | +1.6 | 25.5 | -0.8 |
| 10 | 40.1 | -0.3 | 44.0 | +2.3 | 27.3 | +3.0 | 23.4 | -2.9 |
| 11 | 38.0 | -2.4 | 45.9 | +4.2 | 25.3 | +1.0 | 27.1 | +0.8 |
| 12 | 35.0 | -5.4 | 46.6 | +4.9 | 29.8 | +5.5 | 27.5 | +1.2 |
| Mean | 37.8 | | 44.8 | | 26.3 | | 25.8 | |
| Mean D.M.%: | 82.2 | | 81.4 | | 87.8 | | 89.3 | |

64/B/7.3

SWEDES, ROOTS

| Treatment | Great Field IV | | Sawyers I | |
|-----------|----------------|----------|-----------|----------|
| | Mean | Increase | Mean | Increase |
| | | | (±0.959) | (±1.356) |
| 1 | 7.82 | | 4.65 | |
| 2 | 12.36 | +4.54 | 8.80 | +4.15 |
| 3 | 15.70 | +7.88 | 10.29 | +5.64 |
| 4 | 11.90 | +4.08 | 7.53 | +2.88 |
| 5 | 12.87 | +5.05 | 8.33 | +3.68 |
| 6 | 14.77 | +6.95 | 9.89 | +5.24 |
| 7 | 13.24 | +5.42 | 11.26 | +6.61 |
| 8 | 13.10 | +5.28 | 10.06 | +5.41 |
| 9 | 13.43 | +5.61 | 9.53 | +4.88 |
| 10 | 12.36 | +4.54 | 8.80 | +4.15 |
| 11 | 13.98 | +6.16 | 9.15 | +4.50 |
| 12 | 13.24 | +5.42 | 9.74 | +5.09 |
| Mean | 12.90 | | 9.00 | |

0.7/1.0

SWISS, ROOTS

| Year | Mean Increase | Mean Increase | Mean Increase |
|------|---------------|---------------|---------------|
| | (1950-55) | (1955-60) | (1960-65) |
| 1950 | 10.50 | 10.50 | 10.50 |
| 1951 | 10.50 | 10.50 | 10.50 |
| 1952 | 10.50 | 10.50 | 10.50 |
| 1953 | 10.50 | 10.50 | 10.50 |
| 1954 | 10.50 | 10.50 | 10.50 |
| 1955 | 10.50 | 10.50 | 10.50 |
| 1956 | 10.50 | 10.50 | 10.50 |
| 1957 | 10.50 | 10.50 | 10.50 |
| 1958 | 10.50 | 10.50 | 10.50 |
| 1959 | 10.50 | 10.50 | 10.50 |
| 1960 | 10.50 | 10.50 | 10.50 |
| 1961 | 10.50 | 10.50 | 10.50 |
| 1962 | 10.50 | 10.50 | 10.50 |
| 1963 | 10.50 | 10.50 | 10.50 |
| 1964 | 10.50 | 10.50 | 10.50 |
| 1965 | 10.50 | 10.50 | 10.50 |
| 1966 | 10.50 | 10.50 | 10.50 |
| 1967 | 10.50 | 10.50 | 10.50 |
| 1968 | 10.50 | 10.50 | 10.50 |
| 1969 | 10.50 | 10.50 | 10.50 |
| 1970 | 10.50 | 10.50 | 10.50 |
| 1971 | 10.50 | 10.50 | 10.50 |
| 1972 | 10.50 | 10.50 | 10.50 |
| 1973 | 10.50 | 10.50 | 10.50 |
| 1974 | 10.50 | 10.50 | 10.50 |
| 1975 | 10.50 | 10.50 | 10.50 |
| 1976 | 10.50 | 10.50 | 10.50 |
| 1977 | 10.50 | 10.50 | 10.50 |
| 1978 | 10.50 | 10.50 | 10.50 |
| 1979 | 10.50 | 10.50 | 10.50 |
| 1980 | 10.50 | 10.50 | 10.50 |
| 1981 | 10.50 | 10.50 | 10.50 |
| 1982 | 10.50 | 10.50 | 10.50 |
| 1983 | 10.50 | 10.50 | 10.50 |
| 1984 | 10.50 | 10.50 | 10.50 |
| 1985 | 10.50 | 10.50 | 10.50 |
| 1986 | 10.50 | 10.50 | 10.50 |
| 1987 | 10.50 | 10.50 | 10.50 |
| 1988 | 10.50 | 10.50 | 10.50 |
| 1989 | 10.50 | 10.50 | 10.50 |
| 1990 | 10.50 | 10.50 | 10.50 |
| 1991 | 10.50 | 10.50 | 10.50 |
| 1992 | 10.50 | 10.50 | 10.50 |
| 1993 | 10.50 | 10.50 | 10.50 |
| 1994 | 10.50 | 10.50 | 10.50 |
| 1995 | 10.50 | 10.50 | 10.50 |
| 1996 | 10.50 | 10.50 | 10.50 |
| 1997 | 10.50 | 10.50 | 10.50 |
| 1998 | 10.50 | 10.50 | 10.50 |
| 1999 | 10.50 | 10.50 | 10.50 |
| 2000 | 10.50 | 10.50 | 10.50 |
| 2001 | 10.50 | 10.50 | 10.50 |
| 2002 | 10.50 | 10.50 | 10.50 |
| 2003 | 10.50 | 10.50 | 10.50 |
| 2004 | 10.50 | 10.50 | 10.50 |
| 2005 | 10.50 | 10.50 | 10.50 |
| 2006 | 10.50 | 10.50 | 10.50 |
| 2007 | 10.50 | 10.50 | 10.50 |
| 2008 | 10.50 | 10.50 | 10.50 |
| 2009 | 10.50 | 10.50 | 10.50 |
| 2010 | 10.50 | 10.50 | 10.50 |
| 2011 | 10.50 | 10.50 | 10.50 |
| 2012 | 10.50 | 10.50 | 10.50 |
| 2013 | 10.50 | 10.50 | 10.50 |
| 2014 | 10.50 | 10.50 | 10.50 |
| 2015 | 10.50 | 10.50 | 10.50 |
| 2016 | 10.50 | 10.50 | 10.50 |
| 2017 | 10.50 | 10.50 | 10.50 |
| 2018 | 10.50 | 10.50 | 10.50 |
| 2019 | 10.50 | 10.50 | 10.50 |
| 2020 | 10.50 | 10.50 | 10.50 |
| 2021 | 10.50 | 10.50 | 10.50 |
| 2022 | 10.50 | 10.50 | 10.50 |
| 2023 | 10.50 | 10.50 | 10.50 |
| 2024 | 10.50 | 10.50 | 10.50 |
| 2025 | 10.50 | 10.50 | 10.50 |
| 2026 | 10.50 | 10.50 | 10.50 |
| 2027 | 10.50 | 10.50 | 10.50 |
| 2028 | 10.50 | 10.50 | 10.50 |
| 2029 | 10.50 | 10.50 | 10.50 |
| 2030 | 10.50 | 10.50 | 10.50 |