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Details of the Classical and Long-term Experiments 1968-73

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R/RN/7 Residual Phosphate - Barley, Potatoes, Swedes

Rothamsted Research

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RESIDUAL PHOSPHATE

ROTHAMSTED, GREAT FIELD IV AND SAWYERS I

(R/RN/7)

The crop rotation and phosphate manuring programmes for the second period 1967-72 (*Details 1967*, p.89) have been followed. In 1973 the rotation was continued for one more year before changes in 1974, and the treatments were slightly altered on metrication in 1973.

NOTE: The potash applied as a basal manure is the sulphate, not the muriate as stated on p. 90 (*Details 1967*).

Treatments (all as granular superphosphate kg P₂O₅/ha)

Symbol	Frequency	Total 1967-72	1973
0	None	—	0
A1	Annual	188*	29*
A2	Annual	377*	57*
A3	Annual	753*	115*
A4	Annual	1130*	172*
T1	1969, 1972	188*	—
T2	1969, 1972	377*	—
R2	1967	377 ^o	344+
R3	1967	753 ^o	688+
R4	1967	1130 ^o	1032+
G1	None since		
S1	1960		

For details of manuring during the first period 1960-65 and the fallow of 1966 see *Details 1967*, pp 88-89.

* applied in seedbed

+ half applied in autumn before ploughing and half in spring before cultivation

o half applied in June and half in September 1966 and worked into fallow

Basal dressings (kg/ha)

Broadcast in spring before sowing or planting as 'Nitro-Chalk' and sulphate of potash; except for barley since 1970 as (25-0-16) combine drilled.

		N	K ₂ O
Barley:	1968-69	50 Great Field	126
		100 Sawyers	126
	1970-	100	63
Potatoes:	1968-69	150	188
	1970-	251	251
Swedes:	1968-73	63	126

Liming

Ground chalk applied before ploughing in autumn to land to be cropped with barley t/ha

1968	None
1969	2.9

	1970-71	3.1
	1972	2.9
	1973	None
Varieties		
Barley:	1968-69 1970-73	Maris Badger Julia (dressed with ethirimol 1972 and 1973.)
Potatoes:	Majestic, chitted seed: 1968 1969-71 1972 1973	Irish A Once grown Scotch Foundation Stock
Swedes:	1968-73	Wilhelms dressed with Gamma-BHC with captan (1970 Green Globe turnips were sown in place of swedes which failed)
Weedkillers		
Barley:	1969-70 1971-72 1973	2,4-D with dichloroprop Ioxynil, bromoxynil with dichloroprop Dicamba, mecoprop with MCPA
Potatoes:	1968	Paraquat with linuron
Swedes:	1972	Paraquat to previous barley stubble
Other chemicals applied		
Potatoes:	1968 1968-	Mancozeb and demeton-S-methyl Sulphuric acid (BOV) to burn off tops
Areas harvested		
	Great Field IV	Sawyers I
Barley and potatoes:	0.00520	0.00572
Swedes:	0.00390	0.00429
Soil series		
Great Field	Batcombe series	
Sawyers I	Batcombe series with sandier variants.	