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



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### **Rothamsted Research**

Rothamsted Research (1977) *R/CS/24 P K to Take-all - Barley*; Details Of The Classical And Long-Term Experiments 1968-73, pp 76 - 77 - **DOI: https://doi.org/10.23637/ERADOC-1-193** 

# PK AND TAKE-ALL ROTHAMSTED WEST BARNFIELD II

(R/CS/24)

This experiment, started in 1968, is designed to study the effects of different amounts of phosphate and potash on the yield and incidence of soil-borne diseases, particulary take-all (*Gaeumannomyces graminis*) in continuous cereals (barley until 1973).

### Design

1968-69: 5 x 2, in 4 randomised blocks of 10 plots

1970- 5 x 2 x 4 in 4 blocks of 10 plots split into two for N.

#### Treatments

All combinations of:

Whole plots (a) None	Phosphate (kg P <sub>2</sub> 0 <sub>5</sub> ) as superphosphate
38 150	annually to seedbed
226 904	Six-yearly, last applied autumn 1967, half before ploughing, half after
(b)	Potash (kg K20) as muriate of potash
37.5 150	annually to seedbed

NOTE: Rates of P and K have been slightly changed from 1974

From 1970.

Sub-plots (c) Nitrogen (kg N) applied cumulatively in successive years 38

75

113 150

### **Basal applications**

Nitrogen: 1968 & 1969 100 kg N

Liming

1969 2.9 t ground chalk 1972 5.0 t ground chalk

Weedkillers

1968 & 1969, Paraquat applied to stubble in
1971-73 previous autumn
1968 Aminotriazole with ammonium thiocyanate in previous autumn
1969 & 1970 2,4-D with dichlorprop
1971 Icxynil, bromoxynil with dichlorprop
1972 Ioxynil, bromoxynil, dichlorprop with MCPA

1973 Dicamba, mecoprop with MCPA

Varieties

1968 & 1969

Maris Badger

1970-73

Julia

Areas harvested

1968 & 1969

0.00567

1970

0.00264 - 0.00273

Soil series

Hook series