



ROTHAMSTED
RESEARCH

Broadbalk wheat experiment plan 1926-1967

DOI: [10.23637/rbk1-plan1926-67-01](https://doi.org/10.23637/rbk1-plan1926-67-01)

Prepared by: Glendining, M.J., CAS Department, Rothamsted Research, Harpenden, Herts, AL5 2JQ, UK.

Published by: Electronic Rothamsted Archive, Rothamsted Research

Date: October 2017

Description: Experiment plan for the Broadbalk wheat experiment, 1926-1967, with details of fertilizer and manure treatments (not to scale).

- **Page 1:** Cover page
- **Pages 2-3** Broadbalk experiment plan 1926-1967, showing plot layout and treatment codes, with full details of fertilizer and manure treatments applied.

Site: R/BK/1. Broadbalk field, Rothamsted Experimental Farm, Rothamsted Research, West Common, Harpenden, Hertfordshire, AL5 2JQ, UK. Latitude 51.80946, Longitude -0.37301

Related Resources:

- Johnston, A.E. & Garner, H.V. (1969) *The Broadbalk Wheat Experiment 2. Historical Introduction*. Rothamsted Report for 1968, part 2, pp12-25. [10.23637/ERADOC-1-34916](https://doi.org/10.23637/ERADOC-1-34916)
- Rothamsted Experimental Station (1970) *Details of the Classical and Long-Term Experiments up to 1967*, Rothamsted Experimental Station, Lawes Agricultural Trust, Harpenden UK, 128pp [10.23637/ERADOC-1-192](https://doi.org/10.23637/ERADOC-1-192)

Cite as: Rothamsted Research (2017) *Broadbalk wheat experiment plan 1926-1967*. Electronic Rothamsted Archive, Rothamsted Research. [10.23637/rbk1-plan1926-67-01](https://doi.org/10.23637/rbk1-plan1926-67-01)

Funding: Rothamsted Research receives strategic funding from the UK Biotechnology and Biological Sciences Research Council (BBSRC). The Rothamsted Long-term Experiments National Capability is supported by the BBSRC Grant BBS/E/C/000J0300 and the Lawes Agricultural Trust.

Licence and conditions of re-use:



These plans are published under [the Creative Commons Attribution 4.0 International](https://creativecommons.org/licenses/by/4.0/) licence. CC BY 4.00

You are free to adapt, copy, redistribute these plans but must provide appropriate credit using the provided citation, including the DOI and indicate any changes made. You must not apply additional restrictions on the licence.

Fertilizer and organic manure treatments 1926-1967

Strip Treatments applied each year (since 1852)

- 2A FYM since 1885
- 2B FYM
- 3 No fertilizer or manure
- 5 PKNaMg
- 6 N1 PKNaMg
- 7 N2 PKNaMg
- 8 N3 PKNaMg
- 9 N1* PKNaMg since 1894; 9A and 9B received different treatments 1852-93
- 10 N2
- 11 N2 P
- 12 N2 P Na*
- 13 N2 PK
- 14 N2 P Mg*
- 15 N2 PKNaMg (timing of N application different to other plots, see below)
- 16 N4 PKNaMg 1852-64; unmanured 1865-83; N2*PKNaMg since 1884
- Plots 17 and 18 treatments alternate each year:
- 17 N2 applied in even years; PKNaMg applied in odd years
- 18 N2 applied in odd years; PKNaMg applied in even years
- 19 Rape cake 1879-1940; castor bean meal since 1941
N1.5 P and rape cake 1852-78
- 20 N2 KNaMg since 1906, previously no manure or fertilizer

Annual treatment per hectare:

FYM: Farmyard manure at 35t

C: Rape cake 1926-1940, supplying approx. 96kgN (N2).

Castor bean meal 1941-1967, supplying approx. 96 kgN (N2)

P: 35 kgP as superphosphate

K: 90 kgK as potassium sulphate

Na: 16 kgNa as sodium sulphate

Na* 57 kgNa as sodium sulphate

Mg: 11 kgMg as magnesium sulphate

Mg* 31 kgMg as magnesium sulphate

Nitrogen: Annual treatment per hectare

N1: 48 kgN as ammonium sulphate

N1.5 72 kgN as ammonium sulphate

N2: 96 kgN as ammonium sulphate

N3: 144 kgN as ammonium sulphate

N4: 192 kgN as ammonium sulphate

N1*: 48 kgN as sodium nitrate

N2*: 96 kgN as sodium nitrate

Timing of Nitrogen applications:

Ammonium sulphate:

1852-72 All applied in autumn

1873-77 All applied in autumn, except plot 15 in spring

1878-83 All applied in spring, except plot 15 in autumn

1884-1967 24 kgN applied in autumn, remainder in spring (except plot 15 all in autumn)

Sodium nitrate:

1867-1967 All applied in spring, as one application 1867-98, as two equal amounts since 1899, applied from six days to six weeks apart