

Fertilizer and organic manure treatments 1852-1925

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 N1.5 P and rape cake 1852-78, 1879-1925 rape cake only
 - 20 N2 KNaMg since 1906, previously no manure or fertilizer

Annual treatment per hectare:

FYM: Farmyard manure at 35t

- C: Rape cake: Supplied approx. 96kgN (N2).
0.56t 1852-78; 1.91t 1879-82; 2.12t 1883-1925 (omitted 1917-1920).
- P: 35 kgP as superphosphate (omitted 1915)
- K: 90 kgK as potassium sulphate (omitted 1915, 1917-19)
- Na: 16 kgNa as sodium sulphate (omitted 1915)
- Na* 57 kgNa as sodium sulphate (omitted 1915, 1917-19)
- Mg: 11 kgMg as magnesium sulphate (omitted 1915)
- Mg* 31 kgMg as magnesium sulphate (omitted 1915, 1917-19)

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

Sources of data:

Johnston & Garner (1969) Rothamsted Report for 1968, Part 2, pp12-25
Rothamsted Research (2006) 'Guide to the Classical and other Long-term Experiments'
Lawes Agricultural Trust, Harpenden, UK.
Please contact the e-RA Curators for further information