

Exhaustion Land Experiment Plan

1856-1901

1902-1939

Phase I

Phase II

↗ N

Plot No.

Plot 10	Plot 8	Plot 6	Plot 4	Plot 2	1876-1975
W wheat (1856-1875) PKNaMg	W wheat (1856-1875) NPKNaMg	W wheat (1856-1875) N	W wheat (1856-1875) Nil	W wheat (1856-1875) Nil	
Potatoes (1876-1901) PKNaMg	Potatoes (1876-1901) N*PKNaMg	Potatoes (1876-1901) N*	Potatoes (1876-1901) FYM (N*P)	Potatoes (1876-1901) Nil (FYM)	
Cereals (1902-39) Nil	Cereals (1902-39) Nil	Cereals (1902-39) Nil	Cereals (1902-39) Nil	Cereals (1902-39) Nil	
Plot 9	Plot 7	Plot 5	Plot 3	Plot 1	1876-1975
W wheat (1856-1875) PKNaMg	W wheat (1856-1875) NPKNaMg	W wheat (1856-1875) N	W wheat (1856-1875) Nil	W wheat (1856-1875) Nil	
Potatoes (1876-1901) P	Potatoes (1876-1901) NPKNaMg	Potatoes (1876-1901) N	Potatoes (1876-1901) FYM (P)	Potatoes (1876-1901) Nil	
Cereals (1902-39) Nil	Cereals (1902-39) Nil	Cereals (1902-39) Nil	Cereals (1902-39) Nil	Cereals (1902-39) Nil	

(not to scale)

Annual Treatments per hectare, 1856-1901:

Nil : No fertilizer or manure

FYM : 35 of farmyard manure since 1876

Nil (FYM) : FYM 1876-1881, no fertilizer or manure 1882-1901

FYM (P) : FYM plus P until 1882, FYM only 1883-1901

FYM (N*P) : FYM plus N* and P until 1881, FYM plus P 1882, FYM only 1883-1901

N : 96 kg N as ammonium salts (ammonium sulphate & ammonium chloride)

N* : 96 kg N as sodium nitrate

P : 34 kg P (as superphosphate 1876-96, from basic slag 1897-1901)

K : 137 kg K as potassium sulphate (91 kg K 1859-74)

Na : 16 kg Na as sodium sulphate

Mg : 11 kg Mg as magnesium sulphate

1902-1939: No fertilizer or manure applied, cereals grown most years

Previous cropping:

1852-1855 The 'Lois Weedon' plots, which tested different methods of husbandry.
No fertilizer or manure applied to the whole experimental area, w wheat grown.

Sources of data:

Rothamsted (1970) "Details of the Classical and Long-Term Experiments up to 1967",
Rothamsted Experimental Station, Lawes Agricultural Trust, Harpenden UK

Rothamsted (1991) "Guide to the Classical Field Experiments",
Rothamsted Experimental Station, Lawes Agricultural Trust, Harpenden UK

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