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# Rothamsted - the Classical Experiments

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## Hoosfield Spring Barley

### Rothamsted Research

Rothamsted Research (1992) *Hoosfield Spring Barley* ; Rothamsted - The Classical Experiments , pp 19 - 20 - DOI: <https://doi.org/10.23637/ERADOC-1-189>

**TABLE 3**  
*Hoosfield Wheat after fallow (mean yields of grain, t ha<sup>-1</sup>)*

	Hoosfield wheat Years of fallow		Broadbalk wheat Unmanured continuous
	1	3	
1856-65	1.8	-	1.2
1973-82	1.5	2.0	1.6
1984-90	1.2	-	1.3

## HOOSFIELD SPRING BARLEY

Spring barley has been grown continuously here since 1852. The experiment offers interesting contrasts to that on Broadbalk, being spring-sown, having been fallowed only four times to control weeds and testing not only nitrogen, minerals and FYM but also silicate of soda.

In 1968 a crop rotation of potatoes, beans and barley on small areas of some plots and a four-level N test on all plots were introduced. The effects of the two-year break on the yield of barley were small and the whole experiment has again grown continuous barley since 1979.

The design of the experiment is of a factorial nature with east-west strips (see plan) having the four combinations of:

- (1) 0 vs P with
- (2) 0 vs KMg

and north-south strips, which cross these, originally testing forms of nitrogen, all applied at the same rate of N:

- (3) 0 vs sulphate of ammonia vs nitrate of soda vs rape cake (later castor meal)

The nitrate of soda strip was divided for a test of 0 vs silicate of soda.

Additional plots at the south side test FYM, since the experiment started, and residues of FYM applied only during 1852-71.

**TABLE 4**  
*Hoosfield Spring Barley*  
*Mean yield (7 years 1984-90) of Triumph spring barley grain t ha<sup>-1</sup>*

	N0	N1	N2	N3
-	0.8	1.3	1.6	1.7
P	1.8	3.1	3.1	2.9
KMg	1.4	2.4	2.8	2.9
PKMg	1.9	3.9	4.9	5.0
FYM	6.0	6.5	6.6	6.5
	(-)	(S)	(-S)	(S)
N3-	2.0	2.8	2.5	2.4
N3P	2.9	3.8	4.1	4.2
N3KMg	2.6	3.8	2.9	3.3
N3PKMg	5.5	5.5	5.5	5.4

**HOOSFIELD**  
Continuous Spring Barley

		N3	-	1	2	OLD SERIES		
		-	2	3	1	↓		
		1	3	2	-	C		
		2	1	-	3			
	(S)-	2   - 3   1	2   3 1   -	3   - 1   2	1   - 2   3	AAS		
	(S)S	2   3 -   1	-   2 1   3	1   2 3   -	3   - 2   1			
	(-)S	3   - 1   2	2   1 -   3	2   3 1   -	3   1 -   2	AA		
	(-)	-   2 3   1	3   - 2   1	1   - 2   3	2   - 3   1			
		N2	-	1	-	1	3	
		1	2	2	1	-	-	
	FYM	-	1	-	2	3	1	A
		3	3	3	3	2	2	
		1	2	-	-	2	1	
		2	-	2	3	1	-	
	FYM	-	1	3	1	-	-	O
	1852-71	3	3	1	2	3	-	
		-	3	1	2	3	-	
	Strip manures			P	-	P	-	
				K Mg	K Mg	-	-	