

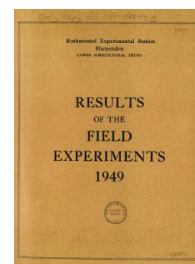
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED  
RESEARCH

## Yields of the Field Experiments 1949

[Full Table of Content](#)



---

### 49/BC/1 Ley and Arable - Highfield and Fosters

49/BC/1 *Ley and Arable - Highfield and Fosters*, Rothamsted Research (1950) Yields Of The Field Experiments 1949, pp 39 - 42

49/Bc/1.1

## LEY AND ARABLE ROTATIONS

### Highfield and Fosters Field - 1949

For details of treatments and rotations see the 1948 Station Report pp 98-99.

Cultivations, etc.:

#### Highfield

Wheat. Ploughed: Nov 1-8. Rolled: Block 1 - Nov 6, Block 4 - Nov 9. Discod twice, seed and basal superphosphate drilled and harrowed in: Nov 10. Wireworm powder drilled: Nov 22. Limed: Feb 2 and 14. Powdered Agroxone drilled: Mar 30 and Apr 27. Nitrochalk applied: Apr 27. Harvested: Aug 4. Variety: Yooman.

Hay, Cut Grass, Grazed Ley and Reseeded Pasture. Ploughed: Nov 17-19. Limed: Feb 2 and 14. Discod: Mar 22. Harrowed: Mar 26. Discod, ring rolled and harrowed: Mar 28. Seeds sown, basal compound drilled: Mar 29. Nitrochalk applied: Apr 29. Hand pulled and cut thistles: June 13-15, July 16-18.

Hay: Harvested: July 27.

Cut Grass: 1st cut June 16. 2nd application of nitrochalk: June 17. 2nd cut: July 27. 3rd application of nitrochalk: July 28.

Grazed Ley: 2nd application of nitrochalk: Aug 2. Grazed: Various periods between June 17 and Sept 11.

Reseeded Pasture: 2nd application of nitrochalk: Aug 2. Grazed: various periods between June 17 and Sept 9.

Old Pasture. Limed: Feb 2 and 14. Chain harrowed: Mar 28. Basal compound drilled: Mar 29. Flat rolled: Mar 30. 1st application of nitrochalk: Apr 29. 2nd application: Aug 2. Grazed: various periods between May 4 and June 16.

Lucerne. Ploughed: Nov 17-19. Limed: Feb 2 and 14. Discod: Mar 22. Harrowed: Mar 26. Discod, ring rolled, harrowed, basal compound drilled, rolled: Mar 29. Seed drilled: Mar 30. Ring rolled: Mar 31. Dusted with D.D.T. against flea beetle and bean weevil: Apr 22. Hood: May 19 and June 9-10. Cut: July 27. Variety: Provence.

#### Fosters Field

Wheat. Ploughed: Oct 25-28. Harrowed twice: Oct 29. Seed and basal superphosphate drilled, and harrowed in: Oct 30. Harrowed and rolled: Apr 12. Nitrochalk applied: Apr 25.

49/Bc/1.2

Poppies pulled: June 22-30. Thistles cut: July 1 and 2.  
Harvested: Aug 3. Variety: Yeoman.

Hay, Cut Grass, Grazed Ley, Reseeded Pasture. Ploughed:  
Nov 24-26. Springtined: Feb 23. Harrowed and ring rolled:  
Mar 25. Basal compound drilled, seeds sown, and harrowed  
in: Mar 26. Ring rolled: Mar 28. Nitrochalk applied:  
Apr 25. Hoed, pulled thistles and weeds: May 31-June 2 and  
July 4-5. Weeds cut with motor scythe: July 11.

Hay. The crop was insufficient for cutting.

Cut Grass. Cut: June 16. Owing to poor crop, no further  
cuts were made. Sprayed with 10% B.O.V. to kill off  
weeds: Oct 7. Because of high proportion of weeds crop  
was ploughed in: Dec-Jan.

Grazed Ley. 2nd application of nitrochalk: Sept 15.  
Sprayed with 10% B.O.V. to kill off weeds: Oct 7.  
Grazed: various periods between June 10 and Sept 11.

Reseeded Pasture. 2nd application of nitrochalk: Sept 15.  
Sprayed with 10% B.O.V. to kill off weeds: Oct 7.  
Grazed: various periods between June 10 and Sept 9.

Lucerne. Ploughed: Nov 24-26. Springtine: Feb 23. Ring  
rolled: Mar 25. Basal compound drilled: Mar 26. Ring  
rolled: Mar 28. Seed drilled, ring rolled: Mar 31.  
Dusted with D.D.T. dust against pea and bean weevil: Apr 22.  
Hoed: May 16 and 19, and June 3-8. Hoed and weeded:  
July 7-12. Cut: July 30. Variety: Provence.

Standard errors per sub-plot.				
Per $\frac{1}{4}$ plot	Wheat. Grain.	Highfield	$\pm 2.06$ cwt per acre or	13.3% (23 d.f.)
"		Fosters	$\pm 2.39$ cwt per acre or	10.3% (23 d.f.)
"	Straw.	Highfield	$\pm 4.11$ cwt per acre or	16.6% (23 d.f.)
"		Fosters	$\pm 4.15$ cwt per acre or	11.5% (23 d.f.)
"	Hay. Dry Matter	Highfield	$\pm 2.02$ cwt per acre or	24.6% (5 d.f.)
Per $\frac{1}{2}$ plot	Ley and Reseeded Pasture.	Highfield	$\pm 2.08$ cwt per acre or	8.9% (5 d.f.)
"		Fosters	$\pm 1.16$ cwt per acre or	7.9% (5 d.f.)

49/Bc/1.3

Wheat. cwt per acre

	cwt N per acre			cwt N per acre		
	0.3	0.6	Mean	0.3	0.6	Mean
	Grain			Straw		
Highfield	15.3 (±0.52)	15.9	15.6	24.1 (±1.03)	25.5	24.8
Foster's	22.4 (±0.60)	24.1	23.3	34.2 (±1.04)	38.3	36.2

Hay. Dry Matter. cwt per acre

	cwt N per acre		
	0.3	0.6	Mean
Highfield	9.0 (±1.01)	7.4	8.2

Cut Grass. 1st year. Dry Matter. cwt per acre.

	cwt N per acre*		
	0.15	0.3	Mean
Highfield (2 cut)	7.2	8.4	7.8
Foster's (1 cut)	4.4	2.4	3.4

Lucerne. 1st year. Dry Matter. cwt per acre

Highfield (1 cut)	18.6
Foster's (1 cut)	12.7

\* Applied in early spring and after each cut.

49/Bc/1.4

Grazed Plots. Estimates from sample cuts of amount of Dry Matter cwt per acre, consumed by sheep.

	cwt N per acre		Mean
	0.15	0.30	
Old Pasture - Highfield	19.2	13.9	16.6
Ley and Reseeded Pasture - Highfield (1st year)	23.4 (±0.85)	23.2	23.3
Ley and Reseeded Pasture - Foster's (1st year)	13.2 (±0.47)	6.2	14.7

Note. For a variety of reasons the sheep weights were considered unreliable and have therefore been omitted.

Average sampling error per sample of Dry Matter Determination expressed as a percentage of a single sample (2 samples per plot).

Old Pasture	- Highfield	49%
Ley and Reseeded Pasture	- Highfield	37%
" " " "	- Foster's	18%

<u>Mean Grazing Days per acre</u>	cwt N per acre		Mean
	0.15	0.30	
Old Pasture - Highfield	1292	1142	1217
Ley and Reseeded Pasture - Highfield (1st year)	602	628	615
" " " " - Foster's	343	360	351