

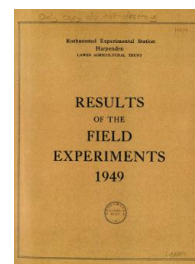
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## Yields of the Field Experiments 1949

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### 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