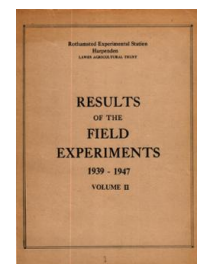


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V Clover and Lucerne

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V/1

CLOVER

Great Knott 1937-39

Second year residual effect of dung, ploughed-in in January or applied in the ridges, and of straw, sulphate of ammonia, superphosphate and sulphate of potash. The manures were applied to the potato crop of 1937.

Design; 4 randomized blocks of 18 plots each, certain interactions being confounded with block differences.

Area of each plot: 0.0250 acre

Treatments

Applied to potatoes in 1937.

Dung: None, 15 tons per acre, either ploughed-in in January or stored and applied in the ridges in May.

Straw: None, 40 cwt. per acre (chaffed) ploughed-in in January, except when applied with the dung in May in which case the straw and dung were mixed and stored.

Sulphate of ammonia: None, 0.4, 0.8 cwt. N per acre.

Superphosphate: None, 0.8 cwt. P_2O_5 per acre.

Sulphate of potash: None, 1.6 cwt. K_2O per acre.

Basal manuring: None, 1 cwt. per acre sulphate of ammonia in 1938.

Crop Notes

Clover undersown in oats: June 7, 1938. Clover cut: July 28, 1939.

Variety: Montgomery Red. Previous crop: Spring oats.

Standard error per plot: 4.36 cwt. per acre or 11.8%, 43 d.f.

For yields of potatoes in 1937 and oats in 1938, see Station Reports for 1937, p.155 and 1938, p.145.

V/2

Clover

Green Clover, cwt. per acre

Dung	Sulphate of ammonia cwt. N			Straw cwt.		Super cwt. P ₂ O ₅		Sulph. pot. cwt. K ₂ O		Mean
	0.0	0.4	0.8	0	40	0.0	0.8	0.0	1.6	
		±1.54			±1.26		±1.26		±1.26	±0.89
None	36.8	38.4	36.1	36.5	37.6	37.1	37.1	36.2	37.9	37.1
Ploughed in	36.9	37.9	37.1	37.9	36.7	37.3	37.4	37.3	37.4	37.3
In ridges	38.3	35.2	34.7	35.7	36.5	35.8	36.3	35.1	37.0	36.1
Mean	37.3	37.2	36.0	36.7	36.9	36.7	36.9	36.2	37.4	36.8
		±0.89			±0.73		±0.73		±0.73	

Sulph. amm. cwt. N	Straw cwt.		Super cwt. P ₂ O ₅		Sulph. pot. cwt. K ₂ O	
	0	40	0.0	0.8	0.0	1.6
		±1.26		±1.26		±1.26
0.0	36.9	37.8	37.8	36.9	36.5	38.2
0.4	37.1	37.2	36.9	37.4	36.5	37.9
0.8	36.1	35.8	35.5	36.4	35.7	36.2

Straw cwt.	Super cwt. P ₂ O ₅		Sulph. pot. cwt. K ₂ O		Super cwt. P ₂ O ₅	Sulph. pot. cwt. K ₂ O	
	0.0	0.8	0.0	1.6		0.0	1.6
		±1.03		±1.03			±1.03
0	37.5	35.9	34.8	38.6	0.0	37.0	36.5
40	35.9	37.9	37.6	36.3	0.8	35.4	38.4

LUCERNE

Woburn Stackyard 1937-1940

Influence of dung on effectiveness of inoculation. In some soils the bacteria necessary to the formation of the nitrogen-producing root nodules in lucerne are absent, and are introduced by inoculation.

Design; 6 randomized blocks of 2 plots each, the plots being split for different applications of dung.

Area of each sub-plot: 0.0100 acre.

Treatments

(applied in 1937)
Inoculated and not inoculated.
Dung: None, 5 tons, 20 tons per acre.

Basal manuring; 1939 and 1940: None.

Crop Notes

Cut; 1939, July 6, Aug. 18, Nov. 15; 1940, June 27, Sept. 3.

Standard errors:

Per whole plot, 1939: 4.52 cwt. per acre or 5.7%, 5 d.f.
1940: 6.54 cwt. per acre or 10.3%, 5 d.f.
Per sub plot: 1939: 6.87 cwt. per acre or 8.6%, 20 d.f.
1940: 10.50 cwt. per acre or 16.6%, 20 d.f.

Hay, cwt. per acre

Dung, tons per acre	None	5	20	Mean
	<u>1939</u>			
		±2.81		±1.85 ^a
Not inoculated	77.6	78.8	81.0	79.1
Inoculated	78.0	80.2	82.8	80.3
Mean ±1.98	77.8	79.5	81.9	79.8
	<u>1940</u>			
		±4.29		±2.67 ^a
Not inoculated	57.7	58.5	65.4	60.5
Inoculated	61.8	67.7	68.5	66.0
Mean ±3.03	59.8	63.1	67.0	63.2

(a) For use in vertical comparisons only. The other standard errors quoted are for use in comparisons between levels of dung.