

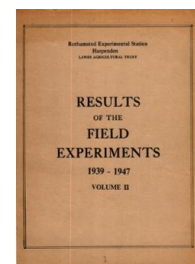
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Yields of the Field Experiments 1939-1947 Volume 2

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T Kale and Spring Cabbage

Rothamsted Research

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T/1

KALE

Woburn - Lansome 1937-39

The residual effects of Lupins as green manure.

Design; 4 x 4 Latin square.

Area of each plot, 0.0102 acre.

Treatments

Lupins were grown over the whole area in 1937.

O = Whole plant removed.

R = Tops removed, roots only buried.

TR = Whole plants buried.

2TR= Whole plants and additional tops from plots receiving treatment (R) buried.

These treatments were applied to kale sown in 1937. This kale crop was a failure on account of drought. Kale was grown again in 1938 and 1939 without further treatments.

Crop Notes

1938. Sown: March 29. Harvested: Jan. 19, 1939. Variety: Thousand Head.
 1939. Sown: May 23. Harvested: Jan. 26, 1940. Variety: Thousand Head

Standard errors per plot:

1938. 0.697 tons per acre or 8.4%, 6 d.f.

1939. 0.796 tons per acre or 18.7%, 6 d.f.

Treatment	Nitrogen content of buried lupins. lb. per acre (1937)		Total
	As tops	As roots	
O	-	-	-
R	-	11.9	11.9
TR	106.6	11.6	118.2
2TR	216.9	11.6	228.5

Total produce, tons per acre

	1938	1939
	±0.348	±0.398
O	6.74	3.50
R	7.20	3.51
TR	8.68	4.73
2TR	10.76	5.31
Mean	8.35	4.26

T/2

KALE

Woburn Butt Furlong 1938-39

The effect of roots and tops of mustard, tares and lupins used as green manures.

Design; 4 randomized blocks of 15 plots each.

Area of each plot, 0.00478 acre.

Treatments

Green manures: Fallow, Mustard, Lupins, Tares. Plants pulled up after growing (O), plants cut and removed, but roots left in ground (R), plants ploughed in as grown (TR), plants ploughed in and additional tops from (R) plots also buried (2TR).

Crop Notes

1939. Green manures sown, April 21. Ploughed-in, July 4. Cut, Feb. 23, 1940. Kale sown, July 5. Variety, Thousand Head. Previous crop, Kale.

Standard error per plot; 0.444 tons per acre or 10.3%, 44 d.f.

Green manures, nitrogen content lb. per acre (1939)

	R	TR	2TR
Fallow		13.2	(from weeds)
Mustard	4.2	36.0	73.8
Lupins	14.5	91.8	159.8
Tares	16.5	58.5	94.0

1939, Total produce, tons per acre

	O	R	TR	2TR	Mean
		±0.222			±0.111
Fallow		4.20 ^a			4.20 ^a
Mustard	3.44	3.02	3.72	4.88	3.76
Lupins	3.48	4.23	5.73	6.31	4.94
Tares	3.30	3.79	4.93	5.14	4.29
Mean ±0.128	3.41	3.68	4.79	5.44	4.30

Standard error (a) 0.128

For 1938 yields, see 1938 Station Report, p. 163.

SPRING CABBAGE

Woburn Lansome 1942
Woburn Butt Close 1943

Effects of various waste organic manures and sulphate of ammonia, and of different times of application of sulphate of ammonia.

Design; 4 randomized blocks of 14 plots each.

Area of each plot, 0.00155 acre.

Treatments

Hoof meal, de-tanned leather waste (two types, L & M), erinoid casein plastic waste and sulphate of ammonia, each at rates of 0.6 and 1.2 cwt. N per acre.

Sulphate of ammonia applied in one dose at the time of planting out, in one dose in early spring, or in 2 equal doses one at the time of planting out and one in early spring.

Crop Notes

	Planted	Cut	Variety	Previous crop
1942	16/10/41	June 24 - July 13	Sutton's Early Giant	Carrots
1943	16/10/42	May	Flower of Spring	Potatoes

In 1943, very considerable damage was done by hares and rabbits; the results given are based on two blocks only, and from these two plots were missing.

Standard error per plot: 1942. Total produce, 0.846 tons per acre or 33.3%,
40 d.f.
1943. Total produce, 1.10 tons per acre or 30.4%,
12 d.f.

Total produce: tons per acre

cwt. N per acre	Sulphate of ammonia							
	None	Hoof meal	Leather waste L	Leather waste M	Casein waste	Planting time	Early spring	Both times
1942. Mean yield: 2.54 tons per acre								
					±0.423			
0.6		3.74	1.88	2.23	2.33	2.59	3.32	2.39
1.2		2.55	2.17	1.49	2.34			4.95
Mean ±0.299	1.81	3.14	2.02	1.86	2.34			3.67
1943. Mean yield 3.61 tons per acre								
					±0.778 ^a			
0.6		2.45	3.04	4.21 ^a	1.83 ^a	2.74	5.06	4.56
1.2		3.64	3.27	3.92	2.64			7.70
Mean ±0.550	2.76	3.04	3.16	4.06 ^b	2.24 ^b			6.13

Standard errors: (a) 1.10, (b) 0.635