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Yields of the Field Experiments 1949

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49/BF/1 Market Garden - First Crops

49/BF/1 Market Garden - First Crops, Rothamsted Research (1950) Yields Of The Field Experiments 1949, pp 55 - 58

49/Bf/1.1

WOBURN MARKET GARDEN EXPERIMENT

Globe Beet and Peas. First crops of 8th year

The use of heavy dressings of organic manures for making a market garden soil, and the effect of sulphate of ammonia.

JRB and JPE - Lansome, 1949

System of replication: 2 series, one of each crop, each consisting of 4 randomized blocks of 10 plots each, certain interactions being confounded with block differences.

Area of each plot: 0.0125 acre

Treatments:

Sulphate of ammonia: None, 0.2 cwt. N per acre on organic manure plots. None, 0.2, 0.4, 0.6 cwt N per acre on plots without organic manure.

Organic manures: Dung, sewage sludge compost, sewage sludge (West Middlesex), and vegetable compost, each at 15 and 30 tons per acre.

Basal manuring: Superphosphate, 0.4 cwt P_2O_5 per acre.
Muriate of potash, 0.5 cwt K_2O per acre.

Cultivations, etc.:

Series B. Globe Beet.

Applied organics and ploughed in: Apr 25-26. Ground lime applied to all plots receiving sulphate of ammonia (plots having 0.4 cwt N at 42 cwt per acre, plots having 0.6 cwt N at 63 cwt per acre, other plots at 21 cwt per acre): Apr 27. Harrowed, rolled, harrowed, rolled, sulphate of ammonia applied (plots having 0.4 and 0.6 cwt N receiving only one half their total dressings), seed drilled and rolled in: Apr 28. Dusted with flea beetle dust: May 21. Thistles cut: June 4. Harrowed: June 7. Harrowed, rolled and thistles cut: June 8. Owing to crop failure redrilled seed and harrowed in: June 8. Rolled: June 9. Dressed with DDT: June 17. Hood: June 23-24 and July 7-12. Second dressing of sulphate of ammonia applied to plots having 0.4 and 0.6 cwt N and all plots hood: July 13. The crop was not singled. Lifted: Aug 3. Variety: Crimson Globe. Previous crop: Leeks.

Series A. Peas.

Applied organics: Mar 1-2. Ploughed in: Mar 2-3. Harrowed, rolled, applied basal manure and sulphate of ammonia (plots having 0.4 and 0.6 cwt N receiving only half their dressing): Mar 28. Harrowed twice: Mar 29. Rolled, peas drilled, rolled: Mar 30. Hood: Apr 20 and 28. Second dressing of sulphate of ammonia applied to plots having 0.4 and 0.6 cwt N: June 8.

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Harvested: July 3-6. Variety: Kelvedon Wonder.
Previous crop: Winter cabbage.

Standard errors per plot:

Globebeet, total produce: 0.831 tons per acre or 27.5%

weight of bulbs: 0.368 tons per acre or 31.6%

plant number: 16.7 thousands per acre or 17.1%

Green peas, marketable weight: 12.5 cwt per acre or 20.5%

49/Bf/1.3

Summary of Results

Globe Beet

Organic manures	Level of manuring (tons per acre)	Sulphate of ammonia, cwt N per acre				Mean
		None	0.2	0.4	0.6.	
Total produce: tons per acre (± 0.588 Means ± 0.416)						
None		1.81	1.51	1.14	1.17	1.66*
Dung	15	4.65	2.17			3.41
	30	4.31	4.67			4.49
Sludge compost	15	2.63	3.89			3.26
	30	4.52	3.88			4.20
Sludge	15	1.57	1.95			1.76
	30	2.32	2.02			2.17
Vegetable compost	15	4.04	4.56			4.30
	30	4.72	2.81			3.77
Weight of bulbs: tons per acre (± 0.260 Means ± 0.184)						
None		0.70	0.52	0.41	0.43	0.61*
Dung	15	1.81	0.84			1.32
	30	2.12	1.70			1.91
Sludge compost	15	1.02	1.09			1.05
	30	1.60	1.68			1.64
Sludge	15	0.43	0.60			0.52
	30	1.15	0.66			0.90
Vegetable compost	15	1.38	2.02			1.70
	30	1.82	1.27			1.55
Plant number: thousands per acre (± 11.80 Means ± 8.34)						
None		87.1	92.7	75.6	81.1	89.9*
Dung	15	110.0	78.8			94.4
	30	113.6	105.3			109.4
Sludge compost	15	92.2	110.8			101.4
	30	116.2	102.0			110.1
Sludge	15	77.2	86.2			81.7
	30	83.7	79.0			81.3
Vegetable compost	15	125.8	120.7			123.3
	30	120.0	94.8			107.4

* Mean over **None** and 0.2 cwt N per acre only.

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Summary of Results

Green Peas

Organic manures	Level of manuring (tons per acre)	Sulphate of ammonia, cwt N per acre				Mean
		None	0.2	0.4	0.6	
Marketable weight: cwt per acre (±8.81 Means ±6.23)						
None		40.0	64.6	71.7	37.5	52.5*
Dung	15	50.7	64.9			57.3
	30	67.4	51.4			59.4
Sludge compost	15	63.2	60.3			61.7
	30	53.9	72.4			63.2
Sludge	15	71.4	70.3			70.8
	30	53.5	58.9			56.2
Vegetable compost	15	67.8	57.8			62.8
	30	59.2	78.9			69.1

*Mean over None and 0.2 cwt N per acre only.