ROTHAMSTED RESEARCH

Yields of the Field Experiments 1950

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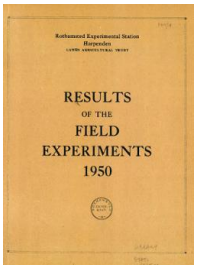

50/BF/1 Market Garden - Woburn First Crops

Rothamsted Research

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50/Bf/1.1

WOBURN MARKET GARDEN EXPERIMENT

Globe Beet and Green Peas. 1st crops of 9th year.

Organic manures and sulphate of ammonia - Lansome 1950.

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

Area of each plot: 0.0125 acre.

Treatments:
Organic manures: Dung, sewage sludge compost, sewage sludge (West Middlesex), and vegetable compost, each at 15 and 30 tons per acre.
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 not receiving organic manures.

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

Cultivations, etc.:
Series A. Globe Beet.
Organics applied and ploughed in: Mar 22-24. Ground chalk applied to all plots receiving sulphate of ammonia (plots having 0.4 N at 11 cwt per acre, plots having 0.6 N at 17 cwt per acre, other plots at 6 cwt per acre): Mar 30. Springtine harrowed, rolled, harrowed and rolled, sulphate of ammonia applied (plots having 0.4 and 0.6 N receiving only half their total dressings), seed drilled and rolled in: Mar 31. Weeded and hoed: May 12, 17 and 24. Hoed: June 1-5 and 12. Singled: June 19-27. Second dressing of sulphate of ammonia applied to plots having 0.4 and 0.6 cwt N, and all plots hoed: June 28. Lifted: July 12-24. Variety: "Detroit" Previous crop: Leeks.

Series B. Green Peas.
Organics applied and ploughed in: Mar 8-9. Harrowed twice, rolled and harrowed: Mar 18. Springtine harrowed and rolled: Mar 20. Harrowed, rolled, sulphate of ammonia applied (plots having 0.4 and 0.6 cwt N receiving only half their total dressings), peas drilled and rolled in: Mar 21. Hoed: Apr 20-21. Weeded: Apr 28. Second dressing of sulphate of ammonia applied to plots having 0.4 and 0.6 cwt N: June 12. Harvested: June 28-July 10. Variety: Kelvedon Wonder. Previous crop: Winter Cabbage.

Standard errors per plot:
Globe Beet, total produce: 1.04 tons per acre or 13.9% (17 d.f.)
weight of bulbs: 0.664 tons per acre or 16.1% (17 d.f.)
plant number: 11.7 thousands per acre or 12.1% (17 d.f.)
Green Peas, marketable produce: 11.3 cwt per acre or 22.2% (17 d.f.)

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Summary of Results

Globe Beet

Organic Manures	Level of manuring (tons/acre)	Sulphate of ammonia cwt N per acre None	0.2	0.4	0.6	Mean
Total produce: Mean 7.49 tons per acre			(±0.739)			(±0.522)
None		3.30	5.20	7.06	6.96	4.25*
Dung	15	6.14	8.28			7.21
	30	10.62	9.58			10.10
Sludge compost	15	6.38	6.12			6.25
	30	7.74	7.28			7.51
Sludge	15	8.08	9.12			8.60
	30	10.12	10.34			10.23
Vegetable compost	15	5.23	6.54			5.88
	30	7.56	8.18			7.88
Weight of bulbs: Mean 4.12 tons per acre			(±0.469)			(±0.332)
None		1.85	2.78	3.64	3.62	2.32*
Dung	15	3.22	4.74			3.98
	30	5.86	5.48			5.66
Sludge compost	15	3.52	3.29			3.41
	30	4.34	4.10			4.22
Sludge	15	4.54	4.97			4.76
	30	5.85	5.76			5.81
Vegetable compost	15	2.84	3.41			3.12
	30	4.04	4.50			4.27
Plant number: Mean 97.1 thousands per acre			(±8.30)			(±5.87)
None		95.4	104.0	105.7	112.4	99.7*
Dung	15	103.6	102.2			102.9
	30	105.4	97.2			101.3
Sludge compost	15	104.4	96.4			100.4
	30	103.8	83.6			93.7
Sludge	15	94.0	79.8			86.9
	30	84.8	86.6			85.8
Vegetable compost	15	98.0	100.8			99.4
	30	101.6	82.4			92.0

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

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Green Peas

Organic Manures	Level of manuring (tons/acre)	Sulphate of ammonia cwt N per acre None	0.2	0.4	0.6	Mean
Marketable weight: Mean 50.8 cwt per acre						
			(±8.00)			(±5.66)
None		45.0	32.8	45.7	52.8	38.9*
Dung	15	68.5	64.2			66.4
	30	57.8	64.9			61.4
Sludge compost	15	51.4	43.9			47.6
	30	69.6	47.1			58.3
Sludge	15	27.5	49.2			38.4
	30	33.2	46.4			39.8
Vegetable compost	15	47.8	58.5			53.2
	30	56.4	53.5			55.0

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

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