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Yields of the Field Experiments 1959

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59/W/BF/1 Market Garden Soil

Rothamsted Research

Rothamsted Research (1960) *59/W/BF/1 Market Garden Soil* ; Yields Of The Field Experiments 1959, pp 58 - 60 - DOI: <https://doi.org/10.23637/ERADOC-1-179>

59/Bf/1.2

Summary of Results

Organic manures	Level of manuring: tons per acre	N: cwt per acre				Mean
		None	0.3	0.6	0.9	
		Leeks 1958-59. Saleable produce: tons per acre				
		(±0.390)				(±0.276)
None		1.80	4.04	4.40	4.67	2.92*
Dung	10	5.61	6.18			5.90
	20	6.33	6.64			6.48
Sludge compost	10	5.86	6.13			6.00
	20	6.02	6.19			6.11
Sludge	10	5.33	5.75			5.54
	20	5.61	5.19			5.40
Vegetable compost	10	5.38	6.11			5.75
	20	6.16	6.49			6.32
Mean (±0.138)		5.79 ⁺	6.08 ⁺			5.49 ^{**}

Leeks 1958-59. Percentage saleable (by number)

None		68.5	96.6	97.4	96.8	82.6*
Dung	10	98.2	99.1			98.6
	20	99.1	97.6			98.4
Sludge compost	10	96.5	99.3			97.9
	20	98.7	97.4			98.0
Sludge	10	99.2	97.4			98.3
	20	98.0	97.6			97.8
Vegetable compost	10	98.6	98.3			98.4
	20	98.6	97.6			98.1
Mean		98.4 ⁺	98.0 ⁺			96.5 ^{**}

Early potatoes. Total tubers: tons per acre

		(±0.396)				(±0.280)
None		2.82	4.31	4.96	4.34	3.56*
Dung	10	4.63	6.00			5.32
	20	6.40	6.28			6.34
Sludge compost	10	5.68	5.35			5.52
	20	6.55	7.81			7.18
Sludge	10	5.21	5.30			5.25
	20	5.38	6.43			5.90
Vegetable compost	10	4.58	4.98			4.78
	20	5.68	6.90			6.29
Mean (±0.140)		5.51 ⁺	6.13 ⁺			5.48 ^{**}

* Mean over None and 0.3 cwt N per acre only.

⁺ Excluding 'no organics'.

^{**} General mean.

59/Bf/1.3

Globe beet

Organic manures	Level of manuring: tons per acre	N: cwt per acre				Mean
		None	0.3	0.6	0.9	
<u>Saleable bulbs: tons per acre</u>						
		(± 0.786)				(± 0.556)
None		1.69	3.68	5.76	4.77	2.69*
Dung	10	8.15	8.62			8.39
	20	10.47	11.64			11.05
Sludge compost	10	7.27	8.87			8.07
	20	8.79	9.30			9.05
Sludge	10	6.65	7.53			7.09
	20	8.99	7.86			8.42
Vegetable compost	10	8.01	9.12			8.57
	20	8.99	10.40			9.69
Mean (± 0.278)		8.41 ⁺	9.17 ⁺			7.83 ^{**}
<u>Total produce (whole plants): tons per acre</u>						
None		3.26	5.87	8.75	7.55	4.57*
Dung	10	10.78	12.04			11.41
	20	13.74	15.64			14.69
Sludge compost	10	10.34	12.09			11.22
	20	12.53	12.64			12.58
Sludge	10	9.68	10.80			10.24
	20	12.55	11.05			11.80
Vegetable compost	10	10.84	12.30			11.57
	20	12.06	14.23			13.15
Mean		11.56 ⁺	12.60 ⁺			10.94 ^{**}
<u>Plant number: thousands per acre</u>						
None		61.4	74.2	81.0	71.6	67.8*
Dung	10	79.4	90.3			84.9
	20	88.3	84.1			86.2
Sludge compost	10	86.3	72.4			79.4
	20	81.5	71.5			76.5
Sludge	10	76.0	77.7			76.9
	20	81.7	62.9			72.3
Vegetable compost	10	81.7	80.5			81.1
	20	83.5	93.0			88.3
Mean		82.3 ⁺	79.1 ⁺			79.0 ^{**}

* Mean over None and 0.3 cwt N per acre only.

⁺ Excluding 'no organics'.

^{**} General mean.

59/Bg/1.1

IRRIGATION EXPERIMENT

Third year of revised scheme (the 9th year)

The effects of irrigation and nitrogen - Woburn Butt Close 1959.

For details of previous cropping, treatments etc. see "Details of the Classical and Long Term Experiments" 1956.

In 1959 the number of irrigation treatments on sugar beet was reduced to 2, and demeton methyl spray was applied to give a test of (0 v. full irrigation) × (0 v. insecticide).

As the spring beans had made excessive growth the irrigation treatment (C) was altered after June 29 as follows:

C₁ unchanged; C₂ at about half the rate of C₁; C₃ no further irrigation.

Area of each sub-plot (acres): Cut grass, 0.0264; remainder, 0.0279.

Area harvested (acres): Sugar beet, 0.0176; spring wheat, 0.0095; spring beans, 0.0167; cut grass, 0.0165.

Rainfall and Irrigation: inches

Week ending	Rainfall	Grass		Wheat			Beans			
		C	C	A	B	C	C	C	C	
May 4	0.63	-	-	-	-	-	-	-	-	
11	0.01	0.50	-	-	-	-	-	-	-	
18	0.01	0.50	0.50	-	0.50	0.50	0.50	0.50	-	
25	0.27	0.50	-	-	0.50	0.50	-	-	-	
June 1	-	0.33	0.33	-	0.33	0.33	0.33	0.33	-	
8	0.14	0.70	0.70	-	0.83	0.83	0.83	1.00	-	
15	0.30	0.50	0.75	-	0.50	0.50	0.50	0.75	-	
22	0.01	0.50	0.75	0.50	-	0.50	0.50	0.75	-	
29	0.48	0.75	0.75	0.75	-	0.75	0.75	0.50	-	
July 6	0.02	-	-	-	-	-	-	C ₁ 0.50	C ₂ 0.25	C ₃ 0.25
13	1.37	0.50	0.50	0.75	-	0.75	0.75	0.25	0.25	-
20	0.05	-	-	-	-	-	-	-	-	-
27	0.12	1.00	1.00	-	-	-	-	0.75	0.38	-
Aug 3	1.26	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
17	0.83	-	0.50	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-
31	-	0.50	0.50	-	-	-	-	-	-	-
Sept 7	-	0.50	0.50	-	-	-	-	-	-	-
14	-	-	0.50	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-
28	0.08	-	-	-	-	-	-	-	-	-
Total	5.58	6.78	7.28	2.00	2.66	4.66	5.33	4.46	3.83	-