

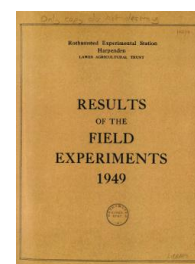
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Yields of the Field Experiments 1949

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49/DA/2 Irrigation - Milford - Sugar Beet

49/DA/2 Irrigation - Milford - Sugar Beet, Rothamsted Research (1950) Yields Of The Field Experiments 1949, pp 94 - 97

49/Da/1.4

Cwt N per acre including basal	Irrigation: inches					Mean
	0	6½	8½	13	12 plus pot. nitrate	
	Plant number: thousands per acre					
	(1) and (2)	(3) and (4)				(±0.23)
0.4	37.8	39.0	37.7	37.1	37.7	37.9
0.7	38.1	38.0	37.9	37.1	37.0	37.7
1.0	37.9	37.6	37.7	35.8	37.6	37.4
1.3	37.5	37.7	36.7	35.7	35.9	36.8
Mean	37.8 (±0.23)	38.1	37.5 (±0.33)	36.4	37.1	37.5
	Noxious Nitrogen					
	(1) and (2)	(3) and (4)				(±1.72)
0.4	75.0	58.3	51.7	58.3	60.0	63.1
0.7	79.2	55.0	53.3	55.0	65.0	64.4
1.0	86.7	73.3	63.3	61.7	65.0	72.8
1.3	85.0	66.7	70.0	61.7	75.0	73.9
Mean	81.5 (±2.30)	63.3	59.6 (±3.26)	59.2	66.2	68.5

Standard errors:

	Plant number	Noxious nitrogen
1 for vertical comparisons	±0.40	±2.97
2 for all others	±0.41	±3.45
3 for vertical comparisons	±0.56	±4.20
4 for all others	±0.59	±4.89

49/Da/2.1

SUGAR BEET

The comparison of three levels of irrigation and the effect on them of three levels of nitrogen.

Kesgrave, Suffolk - 1949

System of replication: 4 randomized blocks of 3 plots each, plots being split into 3 for the application of nitrogen.

Area of each sub-plot: 0.0180 acre. Area harvested: 0.0138 acre.

Treatments:

Whole plots. Irrigation: None; as decided by farmer (4"); based on weather data (5½").

Sub-plots. None, 0.45, 0.9 cwt N per acre applied as nitrochalk.

Basal manuring: Compound fertilizer (4% N, 10% P₂O₅, 8% K₂O): 11 cwt per acre.

Salt: 3½ cwt per acre.

Cultivations, etc.: Ploughed: Early spring. Salt applied: Mar 8.
Compound fertilizer applied: Mar 9. Nitrochalk applied: Mar 25.
Seed drilled: Apr 5. Singled: Early May. Harvested: Oct 25.
Variety: Klein E. Previous crop: Potatoes followed by rye as autumn cover.

Standard errors per plot:

Total sugar	whole plot, 2.51 cwt per acre or 6.0%
	sub-plot, 2.51 cwt per acre or 6.0%
Roots (washed),	whole plot, 0.696 tons per acre or 4.8%
	sub-plot, 0.790 tons per acre or 5.5%
Sugar percentage,	whole plot, 0.369
	sub-plot, 0.285
Tops,	whole plot, 0.571 tons per acre or 5.6%
	sub-plot, 0.881 tons per acre or 8.7%
Plant number,	whole plot, 0.67 thousands per acre or 2.5%
	sub-plot, 1.13 thousands per acre or 4.3%
Noxious Nitrogen,	whole plot, 7.22
	sub-plot, 6.20

All whole plot standard errors estimated from 6 d.f.

All sub-plot standard errors estimated from 18 d.f.

49/Da/2.2

cwt N per acre including basal	Irrigation: inches			Mean
	None	4	5½	
Total sugar: cwt per acre				
	(1) and (2)			(±0.72)
0.4	30.2	49.8	53.6	44.5
0.85	30.9	45.5	49.8	42.1
1.3	31.4	42.7	44.3	39.5
Mean (±1.25)	30.8	46.0	49.3	42.0

Roots (washed): tons per acre				
	(1) and (2)			(± 0.228)
0.4	10.93	15.72	17.23	14.63
0.85	11.31	15.05	16.58	14.31
1.3	11.75	15.10	15.52	14.12
Mean (± 0.348)	11.33	15.29	16.45	14.36

Sugar percentage				
	(1) and (2)			(± 0.082)
0.4	13.80	15.82	15.55	15.06
0.85	13.62	15.12	15.05	14.60
1.3	13.35	14.15	14.28	13.92
Mean (± 0.180)	13.59	15.03	14.96	14.53

Standard errors:

	Total Sugar	Roots (washed)	Sugar percentage
(1) for vertical comparisons	1.26	0.395	0.142
(2) for all others	1.62	0.474	0.214

49/Da/2.3

cwt N per acre including basal	Irrigation: inches			Mean
	None	4	5½	
Tops: tons per acre				
	(1) and (2)			(±0.254)
0.4	8.72	8.94	10.14	9.26
0.85	9.78	9.72	11.65	10.38
1.3	9.88	10.48	12.09	10.81
Mean (±0.286)	9.46	9.71	11.29	10.15
Plant number: thousands per acre				
	(1) and (2)			(±0.327)
0.4	28.2	27.3	27.5	27.7
0.85	27.5	27.6	26.8	27.3
1.3	25.0	24.6	24.7	24.8
Mean (±0.335)	26.9	26.5	26.4	26.6
Noxious nitrogen				
	(1) and (2)			(+1.79)
0.4	71.5	53.2	54.0	59.6
0.85	82.0	67.0	63.8	70.9
1.3	81.5	77.5	75.8	78.2
Mean (±3.61)	78.3	65.9	64.5	69.6

Standard errors:

	Tops	Plant number	Noxious nitrogen
(1) for vertical comparisons	0.441	0.566	3.10
(2) for all others	0.459	0.571	4.41