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## Yields of the Field Experiments 1948

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### 48/CE/1 Sugar Beet - Fertilizer Placement

#### Rothamsted Research

Rothamsted Research (1949) *48/CE/1 Sugar Beet - Fertilizer Placement* ; Yields Of The Field Experiments 1948, pp 86 - 87

48/Ce/1.1

## SUGAR BEET

The effects of two methods of broadcasting and of two other methods of placement of two levels of a compound fertilizer.

RS - Long Hoos. 1948

System of replication: 3 randomized blocks of 11 plots each

Area of each plot (after rejecting edge rows): 0.00906 acre

### Treatments:

Levels of fertilizer: None, 5, 10 cwt per acre of National Compound No 2 (9% N, 7% P<sub>2</sub>O<sub>5</sub>, 4½% K<sub>2</sub>O)

Methods of placement: Broadcast before all cultivations, broadcast on seedbed and harrowed in at once, placed in band 2" below and 1" to side of seed, placed in band 2" below and 3" to side of seed.

Basal Manuring: None

Cultivations etc: Ploughed: Sept. 30 - Oct 2. Springtine harrowed then rolled and springtined: Mar 10. Ground chalk applied 2 tons per acre: Mar 13. Fertilizer broadcast before cultivation on appropriate plots: Mar 19. Cultivated: Mar 20. Rolled and springtine harrowed: Mar 22. Harrowed and ring rolled, fertilizer broadcast on seedbed, seed drilled, and fertilizers placed: Mar 30. Dusted against flea beetle: May 7, 14 and 15. Hoed: May 27 - 28. Singled: June 4 - 5. Hoed: June 12 - 15, 16, 23 - 24, July 15 - 16 and 19 - 20. Lifted: Dec 8. Variety: Klein E. Previous crop: Barley.

### Standard errors per plot:

Clean beet: ±0.950 tons per acre or 7.33%  
Sugar percentage: ±0.352  
Total sugar: ±3.27 cwt per acre or 7.4%  
Tops: ±1.70 tons per acre or 12.2%  
Plant number: ±1.02 thousand per acre or 4.4%

All standard errors estimated from 22 d.f.

48/Ce/1.2

Fertilizer (cwt/acre)	Broad- cast before cultivations	Broad- cast on seed bed	Band 2" below and 1" to side	Band 2" below and 3" to side	Mean
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Clean Beet: tons per acre ( $\pm 0.549$ )

None					11.49 ( $\pm 0.317$ )
5	13.49	13.77	13.24	13.19	13.42 ( $\pm 0.274$ )
10	13.88	13.37	13.98	13.23	13.61
Mean ( $\pm 0.388$ )	13.68	13.57	13.61	13.21	12.97

Sugar Percentage: ( $\pm 0.203$ )

None					17.14 ( $\pm 0.117$ )
5	17.09	17.11	17.11	16.98	17.07 ( $\pm 0.102$ )
10	16.77	16.79	16.79	17.26	16.90
Mean ( $\pm 0.144$ )	16.93	16.95	16.95	17.12	17.03

Total Sugar: cwt per acre ( $\pm 1.89$ )

None					39.4 ( $\pm 1.09$ )
5	46.1	47.1	45.3	44.8	45.8 ( $\pm 0.95$ )
10	46.6	44.9	47.0	45.7	46.0
Mean ( $\pm 1.34$ )	46.3	46.0	46.2	45.2	44.1

Tops: tons per acre ( $\pm 0.983$ )

None					10.44 ( $\pm 0.567$ )
5	13.64	12.36	13.52	15.01	13.63 ( $\pm 0.491$ )
10	16.42	15.96	18.89	16.55	16.95
Mean ( $\pm 0.695$ )	15.03	14.16	16.21	15.78	13.97

Plant Number: thous. per acre ( $\pm 0.589$ )

None					23.2 ( $\pm 0.340$ )
5	22.7	22.7	23.1	23.3	23.0 ( $\pm 0.295$ )
10	23.2	23.1	23.4	22.6	23.1
Mean ( $\pm 0.417$ )	23.0	22.9	23.3	22.9	23.1