

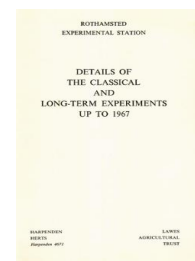
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## Details of the Classical and Long-term Experiments Up to 1967

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### Two-course Rotation - Rothamsted

#### Rothamsted Research

Rothamsted Research (1970) *Two-course Rotation - Rothamsted* ; Details Of The Classical And Long-Term Experiments Up To 1967, pp 63 - 63 - DOI: <https://doi.org/10.23637/ERADOC-1-192>

## TWO-COURSE ROTATION EXPERIMENT, EFFECT OF AGRICULTURAL SALT, LONG HOOS V and VII, 1942-50

The crop rotation was sugar beet, barley. There were 96 plots arranged in randomised blocks of 12. The blocks were grouped in two series, one in each crop each year. Treatments were first applied to sugar beet, in 1942 (Series I) and 1943 (Series II).

**Treatments.** All combinations of the following factors, applied cumulatively:

*Salt to sugar beet:* 0, 2.5, 5, 7.5 cwt agricultural salt

*Muriate of potash to sugar beet:* none, the equivalent of half the single dressing of salt (i.e. 0, 1, 2 cwt  $K_2O$  approximately)

*Time of application of salt:* in seedbed at sowing time, before ploughing in winter (1942 and 1943; after ploughing, one month before sowing)

*Salt to barley:* none, at half rates applied to sugar beet.

**Basal dressings, applied at sowing:**

Barley: 0.3 cwt N as sulphate of ammonia

Sugar beet: 0.8 cwt N as sulphate of ammonia

0.6 cwt  $P_2O_5$  as superphosphate.

### Reference

For a summary of the results to 1949 see *Rep. Rothamsted exp. Stn for 1949*, 101-104.

TABLE 25

*Two-course rotation*

Sugar beet, total sugar: cwt

Means over eight years, 1942-49

| Salt to<br>sugar beet:<br>cwt | Muriate of potash:<br>cwt |      |      | Mean |
|-------------------------------|---------------------------|------|------|------|
|                               | None                      | 2    | 4    |      |
| None                          | 40.9                      | 43.7 | 45.9 | 43.5 |
| 2.5                           | 50.0                      | 47.8 | 49.0 | 48.9 |
| 5                             | 50.0                      | 50.2 | 49.5 | 49.9 |
| 7.5                           | 48.0                      | 49.4 | 50.0 | 49.1 |
| Mean                          | 47.2                      | 47.8 | 48.6 | 47.9 |

TABLE 26

*Two-course rotation experiment*

Barley, grain: cwt

Means over eight years, 1943-50

| Salt to<br>barley:<br>cwt | Muriate of potash:<br>cwt |      |      | Mean |
|---------------------------|---------------------------|------|------|------|
|                           | None                      | 2    | 4    |      |
| None                      | 27.7                      | 28.4 | 27.4 | 27.8 |
| 1.25                      | 28.3                      | 28.7 | 28.3 | 28.4 |
| 2.50                      | 27.5                      | 27.8 | 27.3 | 27.5 |
| 3.75                      | 27.0                      | 28.7 | 28.2 | 27.9 |
| Mean                      | 27.6                      | 28.4 | 27.8 | 27.9 |