

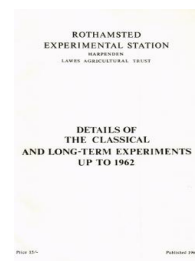
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Hoosfield- Alternate Wheat and Fallow

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ALTERNATE WHEAT AND FALLOW,
HOOSFIELD 1856 ONWARDS

Two half-acre strips side by side, one carrying wheat while the other lies fallow these treatments alternating on their respective plots. No manure has been given since 1851. The varieties grown have been the same as those grown on Broadbalk. Square-heads Master since 1900.

In 1932 a modification was made to enable the effect of a 1-year fallow to be compared with that of a 3-year fallow. The strips were divided transversely into four equal sections. When a strip carries wheat only three of the four sections are cropped, the fourth section being left fallow. Each of the eight sections has the triple fallow in turn. The sequence in the 8-year cycle is as follows:-

| | Strip A | | | | Strip B | | | |
|------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | A ₁ | A ₂ | A ₃ | A ₄ | B ₁ | B ₂ | B ₃ | B ₄ |
| 1956 | F | C | C | C | F | F | F | F |
| 1957 | F | F | F | F | C | C | F | C |
| 1958 | C | F | C | C | F | F | F | F |
| 1959 | F | F | F | F | C | C | C | F |
| 1960 | C | C | F | C | F | F | F | F |
| 1961 | F | F | F | F | F | C | C | C |
| 1962 | C | C | C | F | F | F | F | F |
| 1963 | F | F | F | F | C | F | C | C |

(F = Fallow C = Crop)

In autumn 1956 the strips were divided into halves longitudinally. The centre two halves carried on the 8-year cycle as before on plots of half the former width. The outer two strips were assigned to the Entomology Department for field studies on wheat bulb fly, the factors studied being plant density and various sequences of wheat and fallow. No fertilisers are used. All plots have been combine harvested since 1957.

Plot area for fallow effects 1956 onwards; 0.063 acres approximately.

For an account of the long-period results of the Wheat and Fallow experiment see Rep. Rothamst. exp. Sta. for 1956, 184-187. The yearly yields over the period 1851-1900 are given in Memoranda of the Field Experiments 1901, 32.

Table 5

Wheat after Fallow - Hoosfield
8-year means

| | Grain cwt per acre. | | Straw cwt per acre. | |
|-----------|---------------------|------|---------------------|-------|
| | years of fallow | | years of fallow | |
| | 1 | 3 | 1 | 3 |
| 1934-1941 | 9.7 | 10.6 | 14.1 | 16.8 |
| 1942-1949 | 11.6 | 12.9 | 18.4 | 20.9 |
| 1950-1957 | 9.7 | 10.6 | *14.5 | *15.5 |
| 1934-1957 | 10.3 | 11.4 | 15.7+ | 17.4+ |

*Not recorded in 1957 mean of 7 years

+Mean of 23 years