

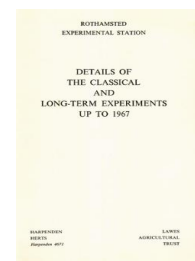
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Hoosfield - Alternate Wheat and Fallow

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ALTERNATE WHEAT AND FALLOW, HOOSFIELD 1856 ONWARDS

Two half-acre strips lie side by side (each divided into four plots since 1932 (see below)), one carrying wheat while the other is fallow, these treatments alternating on their respective plots. No manure has been given since 1851.

In 1932 a modification was made to enable the effect of a one-year fallow to be compared with that of a three-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 eight-year cycle is as follows:

	Strip A				Strip B			
	A1	A2	A3	A4	B1	B2	B3	B4
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
1964	F	C	C	C	F	F	F	F
1965	F	F	F	F	C	C	F	C
1966	C	F	C	C	F	F	F	F
1967	F	F	F	F	C	C	C	F

(F = Fallow. C = Crop)

In autumn 1956 the strips were divided into halves longitudinally. The centre two halves carried on the eight-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 acre approximately.

Variety. The variety grown was the same as that grown on Broadbalk until 1962. Squarehead's Master from 1900 to 1962. In 1963 and 1965 Squarehead's Master was compared with Cappelle. In 1964 Squarehead's Master was compared with Rothwell Perdix. In 1966 Rothwell Perdix and Cappelle were compared but plots A3 and A4 were killed by Wheat Bulb fly and the spring wheat variety Klocka was sown on these two plots. In 1967 Cappelle was sown, seed dressed with dieldrin.

References

For an account of the long-period results of the wheat and fallow experiment see *Rep. Rothamsted exp. Stn for 1956*, pp. 184-187. The yearly yields over the period 1851-1900 are given in *Memoranda of the Field Experiments, Rothamsted, 1901*, 32-33.

ALTERNATE WHEAT AND FALLOW

TABLE 5

Wheat after fallow: Hoosfield

	Eight-year means			
	Grain, cwt		Straw, cwt	
	Years of fallow		Years of fallow	
	1	3	1	3
1934-41	9.7	10.6	14.1	16.8
1942-49	11.6	12.9	18.4	20.9
1950-57	9.7	10.6	14.5*	15.5*
1958-65	9.7	10.9	—	—
1934-65 (32 years)	10.2	11.2	15.7†	17.4†

* Mean of seven years, 1950-56.

† Mean of 23 years (straw yields not recorded after 1956).