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84/R/B/11 Interference Between Plots - S. Barley

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84/R/B/11

SPRING BARLEY

INTERFERENCE BETWEEN PLOTS

Object: To study the influence of neighbouring varieties, on the occurrence of mildew and on yield, in three varieties grown singly or as a mixture - Gt. Harpenden II.

Sponsor: J.F. Jenkyn.

Designs: One was a serially balanced sequence of 9 'blocks' of 4 plots with flanking plots on the outsides, the other was four randomised blocks of 4 plots with spacing plots.

Whole plot dimensions: 2.04 x 18.3.

Treatments:

VARIETY	Varieties:
ATEM	Atem
PATTY	Patty
TRIUMPH	Triumph
MIXTURE	Mixture of Atem, Patty and Triumph

- NOTES: (1) In the serially balanced design plots were separated only by fallow paths 61 cm wide; in the other design plots were separated by equal size 'plots' of Atem s. barley, seed dressed with triadimenol plus fuberidazole, with fallow paths 61 cm wide on each side.
- (2) In the serially balanced design the effects of treatments to neighbouring plots (left - LHN, right - RHN) were estimated. In this experiment 'left' was north-west, 'right' was south-east.

Basal applications: Manures: 'Nitro-Chalk' at 480 kg. Weedkillers: Dicamba, mecoprop and MCPA (as 'Herrisol' at 5.0 l) in 200 l.

Seed: Sown at 160 kg.

Cultivations, etc.: - Ploughed: 5 Dec, 1983. N applied: 21 Mar, 1984. Spring-tine cultivated, rotary harrowed, seed sown: 22 Mar. Weedkillers applied: 15 May. Combine harvested: 19 Aug. Previous crops: Potatoes 1982, w. wheat 1983.

NOTE: Leaf diseases were assessed in late June and mid-July.

84/R/B/11

GRAIN TONNES/HECTARE

SERIALLY BALANCED DESIGN

***** TABLES OF MEANS *****

VARIETY	ATEM	PATTY	TRIUMPH	MIXTURE
	9.30	8.74	7.64	8.80
LHN	ATEM	PATTY	TRIUMPH	MIXTURE
VARIETY				
ATEM		9.31	9.26	9.33
PATTY	8.66		8.96	8.59
TRIUMPH	7.36	7.89		7.68
MIXTURE	8.87	8.62	8.92	
RHN	ATEM	PATTY	TRIUMPH	MIXTURE
VARIETY				
ATEM		9.21	9.15	9.53
PATTY	8.68		8.97	8.56
TRIUMPH	7.38	7.85		7.70
MIXTURE	8.82	8.66	8.93	
GRAND MEAN	8.62			

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	VARIETY	VARIETY LHN	VARIETY RHN
SED	0.063	0.109	0.109

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.133	1.5

GRAIN MEAN DM% 87.0

RANDOMISED BLOCK DESIGN

***** TABLES OF MEANS *****

VARIETY	ATEM	PATTY	TRIUMPH	MIXTURE	MEAN
	9.39	8.66	7.45	8.97	8.62

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	VARIETY
SED	0.119

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	9	0.168	1.9

GRAIN MEAN DM% 86.8 PLOT AREA HARVESTED 0.00373