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83/R/B/8 Interference Between Plots - S. Barley

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83/R/B/8

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 - Highfield VI.

Sponsor: J.F. Jenkyn.

Designs: One was a serially balanced sequence of 9 'blocks' of 4 plots with flanking plots on the outsides and at a discontinuity necessitated by field layout, the other was four randomised blocks of 4 plots.

Whole plot dimensions: 2.04 x 18.3.

Treatments:

VARIETY	Varieties:
CLARET	Claret
GOLDMARK	Goldmarker
PATTY	Patty
MIXTURE	Mixture of Claret, Goldmarker and Patty

- 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 south-east, 'right' was north-west.

Basal applications: Manures: (0:18:36) at 690 kg. 'Nitro-Chalk' at 480 kg followed by 250 kg. Weedkillers: Mecoprop, bromoxynil and ioxynil (as 'Brittox' at 3.5 l) in 500 l.

Seed: Varieties and mixture sown at 160 kg.

Cultivations, etc.: - PK applied: 18 Oct, 1982. Ploughed: 15 Dec. Spring-tine cultivated, first N applied: 15 Mar, 1983. Spring-tine cultivated, seed sown: 16 Mar. 'Brittox' applied: 26 May. Second N applied: 27 May. Combine harvested: 8 Aug. Previous crops: W. beans 1981, w. wheat 1982.

NOTE: Leaf diseases were assessed in mid-July.

83/R/B/8

GRAIN TONNES HECTARE

SERIALLY BALANCED DESIGN

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

VARIETY	CLARET	GOLDMARK	PATTY	MIXTURE
	7.12	6.58	6.56	6.70
LHN	CLARET	GOLDMARK	PATTY	MIXTURE
VARIETY				
CLARET		7.41	7.18	6.78
GOLDMARK	6.93		6.27	6.55
PATTY	6.58	6.17		6.92
MIXTURE	6.62	6.82	6.67	
RHN	CLARET	GOLDMARK	PATTY	MIXTURE
VARIETY				
CLARET		7.00	7.22	7.15
GOLDMARK	6.64		6.46	6.65
PATTY	6.85	6.26		6.56
MIXTURE	6.19	6.84	7.08	
GRAND MEAN	6.74			

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

TABLE	VARIETY	VARIETY LHN	VARIETY RHN
SED	0.268	0.465	0.465

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.569	8.4
MEAN DM%	87.5		

RANDOMISED BLOCK DESIGN

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

VARIETY	CLARET	GOLDMARK	PATTY	MIXTURE	MEAN
	7.45	6.40	6.45	6.91	6.80

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

TABLE	VARIETY
SED	0.313

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

STRATUM	DF	SE	CV%
BLOCK.WP	9	0.443	6.5

MEAN DM% 87.6 PLOT AREA HARVESTED 0.00373