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# Yields of the Field Experiments 1979

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## 79/R/B/13 Mixed Varieties and Mildew - Barley

### Rothamsted Research

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79/R/B/13

SPRING BARLEY

MIXED VARIETIES AND MILDEW

Object: To study the effects of variety mixtures and of fungicides on mildew development and yield - Gt. Field I.

Sponsor: J.F. Jenkyn.

Design: 4 randomised blocks of 12 plots.

Whole plot dimensions: 6.40 x 9.14.

Treatments:

VAR FUNG	Varieties & fungicides:
H O	Hassan, no fungicide
M O	Midas, no fungicide
W O	Wing, no fungicide
H S	Hassan, seed treated fungicide
M S	Midas, seed treated fungicide
W S	Wing, seed treated fungicide
HO MO WO	Mixture of the three varieties, no fungicide
HS MO WO	Mixture of the three varieties. Fungicide seed treatment to Hassan only
HO MS WO	Mixture of the three varieties. Fungicide seed treatment to Midas only
HO MO WS	Mixture of the three varieties. Fungicide seed treatment to Wing only
HS MS WS	Mixture of the three varieties. Fungicide seed treatment to all
HF MF WF	Mixture of the three varieties. Tridemorph foliar spray to all (Tridemorph at 0.53 kg in 340 l on 18 June)

- NOTES: (1) All plots were separated at their sides by 8.5 m of variety Proctor and at their ends by 9.1 m of variety Proctor. All the Proctor seed was dressed with ethirimol and the crop was sprayed with tridemorph at 0.53 kg in 220 l on 18 June, 1979. Yields were taken from the Proctor adjacent to the sides of plots and treatment yields were adjusted by covariance analysis.
- (2) The fungicide seed treatment applied was 0.375 g triadimenol plus 0.045 g fuberidazole per kg of seed.
- (3) The seed mixtures were in equal proportions by weight.

Basal applications: Manures: (20:14:14) at 440 kg, combine drilled. Weedkillers: Dicamba with mecoprop and MCPA (as 'Banlene Plus' at 4.9 kg in 220 l).

Seed: All, including mixtures and Proctor, sown at 160 kg.

Cultivations, etc.:— Subsoiled, tines 100 cm apart and 45 cm deep: 10 Nov, 1978. Ploughed: 30 Nov. Spring-tine cultivated: 17 Apr, 1979. Seed sown: 18 Apr. Weedkillers applied: 4 June. Combine harvested: 25 Aug. Previous crops: Beans 1977, wheat 1978.

NOTE: Mildew was assessed on two occasions.

79/R/B/13

GRAIN TONNES/HECTARE

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

VAR FUNG	
H O	4.58
M O	5.84
W O	5.46
H S	5.85
M S	6.04
W S	5.82
HO MO WO	5.14
HS MO WO	5.77
HO MS WO	5.57
HO MO WS	5.82
HS MS WS	5.65
HF MF WF	5.87
MEAN	5.62

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

TABLE	VAR FUNG
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SED	0.335

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

STRATUM	DF	SE	CV%
BLOCK.WP	32	0.466	8.3
GRAIN MEAN DM%	80.6		
PLOT AREA HARVESTED	0.00195		