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93/R/BW/1 Companion Cropping - W. Barley

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93/R/BW/1

WINTER BARLEY

COMPANION CROPPING

Object: To measure the effect of companion cropping on pests, diseases, growth, yield and nutrient uptake of cereals - Great Harpenden I.

Sponsor: D.G. Christian.

Design: 3 blocks of 8 plots.

Whole plot dimensions: 6.0 x 10.0.

Treatments:

COMPCROP	Companion crops, broadcast before drilling w. barley:
NONE	None (quadruplicated)
MUST 1.5	White mustard at 1.5 kg
MUST 3.0	White mustard at 3.0 kg
MUST 6.0	White mustard at 6.0 kg
RADISH	Oil radish at 3.0 kg

Experimental diary:

29-Aug-92 : B : Straw baled.
16-Sep-92 : B : Scythe at 2.0 l with Farmon Blue at 0.20 l in 200 l.
21-Sep-92 : B : Ploughed, furrow pressed.
28-Sep-92 : B : Rotary harrowed.
01-Oct-92 : B : Puffin, dressed Cerevax, drilled at 350 seeds per square metre.
 : T : COMPCROP MUST 1.5: White mustard (cv. Tilney) broadcast at 1.5 kg.
 : T : COMPCROP MUST 3.0: White mustard (cv. Tilney) broadcast at 3.0 kg.
 : T : COMPCROP MUST 6.0: White mustard (cv. Tilney) broadcast at 6.0 kg.
 : T : COMPCROP RADISH: Oil radish (cv. Trick) broadcast at 3.0 kg.
08-Mar-93 : B : 34.5% N at 120 kg.
15-Apr-93 : B : Tigress at 2.5 l in 200 l.
21-Apr-93 : B : Ally at 30 g and Starane 2 at 1.0 l in 200 l.
18-May-93 : B : Calirus at 2.0 l and Corbel at 0.50 l in 200 l.
02-Aug-93 : B : Combine harvested.

Previous crops: Potatoes 1991, w. wheat 1992.

NOTE: Plant samples were taken in December and April for dry weight, plant population and nitrogen uptake measurements, and in July to measure ear numbers, dry weights, nitrogen uptake and thousand grain weights.

93/R/BW/1

GRAIN TONNES/HECTARE

***** Tables of means *****

COMPCROP	
NONE	7.11
MUST 1.5	6.93
MUST 3.0	6.54
MUST 6.0	6.81
RADISH	7.26
Mean	6.99

*** Standard errors of differences of means ***

COMPCROP	
0.322	min.rep
0.255	max-min

COMPCROP	
max-min	None v any of the remainder
min.rep	Any of the remainder

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	17	0.395	5.6
GRAIN MEAN DM%	85.2		
PLOT AREA HARVESTED	0.00230		