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92/R/CS/323 Cereal Sequences and Take-all - W. Wheat, W. Barley, S. Barley, W. Triticale, W. Oats

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92/R/CS/323

CEREAL SEQUENCES AND TAKE-ALL

Object: To study the effects on take-all (*Gaeumannomyces graminis*) and yield of including triticale in cereal sequences - West Barnfield II.

Sponsors: R.J. Gutteridge, D. Hornby, R.D. Prew.

The fifth year, w. barley, w. oats, w. triticale, w. wheat, s. barley.

For previous years see 88-91/R/CS/323

Design: 3 randomised blocks of 26 plots.

Whole plot dimensions: 3.0 x 10.0.

CROPSEQ Crop sequences (1988, 1989, 1990, 1991 and 1992 respectively):

W W S S S	W. wheat, w. wheat, s. barley, s. barley, s. barley
B B B B B	W. barley, w. barley, w. barley, w. barley, w. barley
O B B B O	W. oats, w. barley, w. barley, w. barley, w. oats
B O B B B	W. barley, w. oats, w. barley, w. barley, w. barley
B B O B B	W. barley, w. barley, w. oats, w. barley, w. barley
S B S B S	S. barley, w. barley, s. barley, w. barley, s. barley
T T B B B	W. triticale, w. triticale, w. barley, w. barley, w. barley
T B T B T	W. triticale, w. barley, w. triticale, w. barley, w. triticale
W B W B W	W. wheat, w. barley, w. wheat, w. barley, w. wheat
W W B B B	W. wheat, w. wheat, w. barley, w. barley, w. barley
B B B O B	W. barley, w. barley, w. barley, w. oats, w. barley
T T T O T	W. triticale, w. triticale, w. triticale, w. oats, w. triticale
W W W O W	W. wheat, w. wheat, w. wheat, w. oats, w. wheat
T T T T T	W. triticale, w. triticale, w. triticale, w. triticale, w. triticale
B B T T T	W. barley, w. barley, w. triticale, w. triticale, w. triticale
O T T T O	W. oats, w. triticale, w. triticale, w. triticale, w. oats
T O T T T	W. triticale, w. oats, w. triticale, w. triticale, w. triticale
T T O T T	W. triticale, w. triticale, w. oats, w. triticale, w. triticale
W W T T T	W. wheat, w. wheat, w. triticale, w. triticale, w. triticale
W T W T W	W. wheat, w. triticale, w. wheat, w. triticale, w. wheat
W W W W W	W. wheat, w. wheat, w. wheat, w. wheat, w. wheat
B B W W W	W. barley, w. barley, w. wheat, w. wheat, w. wheat
O W W W O	W. oats, w. wheat, w. wheat, w. wheat, w. oats
W O W W W	W. wheat, w. oats, w. wheat, w. wheat, w. wheat
W W O W W	W. wheat, w. wheat, w. oats, w. wheat, w. wheat
T T W W W	W. triticale, w. triticale, w. wheat, w. wheat, w. wheat

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Experimental Diary:

05-Sep-91 : B : Straw baled and removed.
12-Sep-91 : B : Sting CT at 1.5 l in 200 l.
16-Sep-91 : B : PK as (0:16:36) at 300 kg.
18-Sep-91 : B : Ploughed and furrow pressed.
19-Sep-91 : T : W. barley plots: Rotary harrowed, Magie drilled at 140 kg.
 : T : W. oats plots: Rotary harrowed, Image drilled at 124 kg.
 : T : W. triticale plots: Rotary harrowed, Cumulus drilled at 154 kg.
 : T : W. wheat plots: Rotary harrowed, Mercia drilled at 161 kg.
20-Sep-91 : B : Rolled.
20-Sep-91 : T : W. barley, w. triticale and w. wheat plots: Stefes IPU at 2.5 l and Stomp 400 at 2.5 l in 200 l.
 : T : W. oats plots: Glytex at 2.25 kg in 200 l.
25-Feb-92 : T : W. barley, w. triticale, w.wheat and w.oats plots: 34.5% N at 87 kg.
05-Mar-92 : T : S. barley plots: 34.5% N at 348 kg.
 : T : S. barley plots: Rotary harrowed, Klaxon drilled at 136 kg.
14-Apr-92 : T : W. triticale and w.oats plots: 34.5% N at 348 kg.
 : T : W. barley plots: 34.5% N at 435 kg.
 : T : W. wheat plots: 34.5% N at 493 kg.
03-May-92 : B : Starane 2 at 1.0 l and Radar at 0.50 l in 260 l.
24-Jul-92 : T : W. barley plots: Combine harvested.
30-Jul-92 : T : W. wheat, w. triticale and s. barley plots: Combine harvested.
29-Aug-92 : T : W. oats plots: Combine harvested.

NOTE: Plants were sampled in April, June and July to assess take-all, eyespot and sharp eyespot. Soil cores were taken after harvest to assess take-all infectivity.

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GRAIN TONNES/HECTARE

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

CROPSEQ	
W W S S S	6.10
B B B B B	7.10
O B B B O	3.60
B O B B B	7.76
B B O B B	8.08
S B S B S	5.91
T T B B B	7.22
T B T B T	6.16
W B W B W	6.22
W W B B B	7.60
B B B O B	7.53
T T T O T	7.62
W W W O W	7.05
T T T T T	6.96
B B T T T	5.99
O T T T O	4.06
T O T T T	6.70
T T O T T	6.94
W W T T T	7.65
W T W T W	6.40
W W W W W	6.79
B B W W W	6.35
O W W W O	3.65
W O W W W	5.56
W W O W W	6.51
T T W W W	6.07
Mean	6.44

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

CROPSEQ
0.367

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	50	0.450	7.0

GRAIN MEAN DM% 85.4

PLOT AREA HARVESTED 0.00230