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## Yields of the Field Experiments 1997

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### 97/R/BW/1 Beta-acids, Aphids and Bydv - W. Barley

#### Rothamsted Research

Rothamsted Research (1998) *97/R/BW/1 Beta-acids, Aphids and Bydv - W. Barley* ; Yields Of The Field Experiments 1997, pp 125 - 126 - DOI: <https://doi.org/10.23637/ERADOC-1-53>

97/R/BW/1

WINTER BARLEY

BETA-ACIDS, APHIDS AND BYDV

**Object:** To investigate the effects of beta-acids from hops on the aphid colonization and BYDV infection on winter barley - Osier.

**Sponsors:** B.J. Pye, J.A. Pickett, R.T. Plumb.

**Design:** 4 randomised blocks of 4 plots split into 3 sub-plots, systematically arranged.

**Whole plot dimensions:** 3.0 x 10.0.

**Treatments:**

Whole plots

<b>APHCONT</b>	Aphid control and timing:
-	None
C	Cypermethrin in October
F	Formulated control applied on three occasions in autumn
BA	Beta-acids applied on three occasions in autumn

**NOTE:** Composition of beta-acids application was 10% beta-acids, 10% water, 80% ethanol and of formulation, 20% water, 80% ethanol.

**Experimental diary:**

15-Aug-96 : B : Ploughed and pressed.  
02-Sep-96 : B : Rotary harrowed, Puffin, dressed Raxil S at 350 seeds per m<sup>2</sup>.  
17-Oct-96 : T : **APHCONT** BA: Beta acids applied in 10.4 l.  
          : T : **APHCONT** F: Formulation applied in 10.4 l.  
22-Oct-96 : T : **APHCONT** C: Ambush C at 250 g in 10.4 l.  
01-Nov-96 : T : **APHCONT** BA: Beta acids applied in 10.4 l.  
          : T : **APHCONT** F: Formulation applied in 10.4 l.  
14-Nov-96 : T : **APHCONT** BA: Beta acids applied in 10.4 l.  
          : T : **APHCONT** F: Formulation applied in 10.4 l.  
22-Nov-96 : B : Landgold DFF 625 at 2.0 l in 200 l.  
07-Mar-97 : B : 34.5% N at 118 kg.  
26-Mar-97 : B : 34.5% N at 240 kg.  
18-Apr-97 : B : Contrast at 0.625 l in 300 l.  
21-Jul-97 : B : Combine harvested.

Previous crops: W. barley 1995, set-aside 1996.

**NOTE:** Observations of BYDV were made in June.

97/R/BW/1

GRAIN TONNES/HECTARE

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

APHCONT	
-	5.40
C	5.19
F	5.15
BA	5.81
Mean	5.39

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

APHCONT	
	0.537

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	9	0.758	14.1

GRAIN MEAN DM% 89.3

SUB-PLOT AREA HARVESTED 0.00720