ROTHAMSTED RESEARCH

Yields of the Field Experiments 1996

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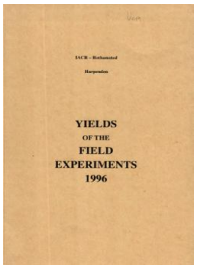

Winter Barley

Rothamsted Research

Rothamsted Research (1997) *Winter Barley ;* Yields Of The Field Experiments 1996, pp 117 - 119 **- DOI: https://doi.org/10.23637/ERADOC-1-51**

96/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 - Highfield V.

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: 9.0 x 10.0.

Treatments:

APHCONT	Aphid control and timing:
-	None
C	Cypermethrin in November
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:

24-Aug-95 : B : Ploughed and furrow pressed.
25-Sep-95 : B : Spring-tine cultivated. Rotary harrowed, Gaelic, dressed Vitaflo Extra, drilled at 350 seeds per m^2.
18-Oct-95 : **T** : **APHCONT** BA: Beta-acids applied at 10.4 l.
: **T** : **APHCONT** F: Formulation applied at 10.4 l.
01-Nov-95 : **T** : **APHCONT** BA: Beta-acids applied at 10.4 l.
: **T** : **APHCONT** F: Formulation applied at 10.4 l.
14-Nov-95 : B : Panther at 2.0 l in 200 l.
16-Nov-95 : **T** : **APHCONT** BA: Beta-acids applied at 10.4 l.
: **T** : **APHCONT** F: Formulation applied at 10.4 l.
: **T** : **APHCONT** C: Ambush C at 250 g in 10.4 l.
07-Mar-96 : B : 34.5% N at 116 kg.
09-Apr-96 : B : 34.5% N at 348 kg.
27-Apr-96 : B : Starane 2 at 1.0 l with Punch C at 0.8 l in 200 l.
10-Jun-96 : B : Punch C at 0.6 l in 320 l.
02-Aug-96 : B : Combine harvested.

Previous crops: Set-aside 1994, w. rape 1995.

NOTE: Counts were made of virus infected plants in May and June.

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GRAIN TONNES/HECTARE

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

APHCONT	
-	10.03
C	9.88
F	9.94
BA	9.67
Mean	9.88

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

APHCONT
0.172

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	9	0.243	2.5
BLOCK.WP.SP	32	0.288	2.9

GRAIN MEAN DM% 86.8

PLOT AREA HARVESTED 0.00230

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96/W/BW/1

WINTER BARLEY

RHYNCHOSPORIUM STUDY

Object: To characterise two geographically separated *Rhynchosporium* populations and to assess their susceptibility to fungicides - Woburn, Butt Close I - IV. The experiment was repeated at Long Ashton Research Station, Bristol.

Sponsor: D.W. Holloman, Long Ashton Research Station.

Design: 2 randomised blocks of 4 plots.

Whole plot dimensions: 20.0 x 24.0.

Treatments:

FUNGCIDE	Fungicide:
-	None
CARB	Carbendazim (Bavistin DF)
CARB+DTB	Carbendazim and diethofencarb (Sumico)
DTB	Diethofencarb

Experimental diary:

20-Sep-95 : B : Ploughed.
24-Nov-95 : B : Rotary harrowed, Chariot, dressed Wireworm FS Seed Treatment, drilled at 440 seeds per m^2.
19-Mar-96 : B : 34.5% N at 116 kg.
10-May-96 : B : 34.5% N at 290 kg.
02-Jun-96 : B : Ally at 30 g in 200 l.
14-Jun-96 : **T** : **FUNGCIDE** CARB: Bavistin DF at 0.5 kg in 300 l.
: **T** : **FUNGCIDE** DTB: Diethofencarb at 2.0 kg in 300 l.
: **T** : **FUNGCIDE** CARB+DTB: Sumico at 2.0 kg in 300 l.
05-Aug-96 : B : Combine harvested.

Previous crops: Various 1994, potatoes 1995.

NOTE: Leaf samples were taken on three occasions and isolates of *Rhynchosporium* were tested for sensitivity to fungicides.

GRAIN TONNES/HECTARE

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

FUNGCIDE	-	CARB	CARB+DTB	DTB	Mean
	2.12	3.27	3.43	2.74	2.89

GRAIN MEAN DM% 89.8

PLOT AREA HARVESTED 0.00440

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