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88/R/RA/3 Varieties, Pests and Diseases - W. Oilseed Rape

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88/R/RA/3

WINTER OILSEED RAPE

VARIETIES, PESTS AND DISEASES

Object: To investigate the effects of full pest and disease control on a range of low glucosinolate varieties compared with Bienvenu - Black Horse II.

Sponsors: C.J. Rawlinson, I.H. Williams.

Design: 2 randomised blocks of 24 plots.

Whole plot dimensions: 3.0 x 15.0.

Treatments: All combinations of:-

1. **VARIETY** Varieties:

ARIANA	Ariana
BIENVENU	Bienvenu
COBRA	Cobra
NRPB 2	NRPB 0087-2
PBI 1	PBI 1
PBI 3	PBI 3

2. **INSCTCDE** Insecticides:

NONE	None
FULL	Deltamethrin at 0.0062 kg in 200 l on 13 Nov, 1987. Azinphos methyl at 0.40 kg and demeton-S-methyl sulphone at 0.12 kg in 300 l on 18 Apr, 1988. Triazophos at 0.42 kg in 200 l on 16 June.

3. **FUNGCIDE** Fungicides:

NONE	None
FULL	Prochloraz at 0.50 kg in 200 l on 18 Nov, 1987 and 11 Apr, 1988. Iprodione at 0.50 kg in 200 l on 16 June.

Basal applications: Manures: 'Nitram' at 140 kg, later at 260 kg and a third time at 460 kg. Weedkiller: Metazachlor at 1.2 kg in 200 l. Desiccant: Diquat at 0.60 kg ion with a wetting agent ('Enhance' at 0.50 l) in 500 l.

Seed: Varieties, sown at 8.0 kg.

Cultivations, etc.:- Ploughed: 12 Aug, 1987. First N applied: 18 Aug. Discd: 9 Sept. Seed sown: 17 Sept. Weedkillers applied: 5 Oct. Second N applied: 1 Mar, 1988. Third N applied: 7 Apr. Desiccant with wetting agent applied: 27 July. Combine harvested: 1 Aug. Previous crops: W. wheat 1986, w. barley 1987.

NOTE: Disease assessments were made on eight occasions throughout the season and pest numbers were recorded in autumn, spring and summer. Glucosinolate contents, plant tissues and seed, were measured throughout the season.

88/R/RA/3

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

INSCTCDE VARIETY	NONE	FULL	Mean
ARIANA	3.59	3.50	3.54
BIENVENU	3.80	4.24	4.02
COBRA	3.44	3.97	3.70
NRPB 2	3.31	3.81	3.56
PBI 1	3.76	3.82	3.79
PBI 3	3.68	3.98	3.83
Mean	3.60	3.89	3.74

FUNGCIDE VARIETY	NONE	FULL	Mean
ARIANA	3.19	3.90	3.54
BIENVENU	3.76	4.29	4.02
COBRA	3.20	4.21	3.70
NRPB 2	3.11	4.01	3.56
PBI 1	3.17	4.41	3.79
PBI 3	3.10	4.56	3.83
Mean	3.26	4.23	3.74

FUNGCIDE INSCTCDE	NONE	FULL	Mean
NONE	3.05	4.15	3.60
FULL	3.47	4.31	3.89
Mean	3.26	4.23	3.74

VARIETY	INSCTCDE FUNGCIDE	NONE	FULL	FULL NONE	FULL FULL
ARIANA		3.02	4.16	3.36	3.64
BIENVENU		3.72	3.88	3.79	4.70
COBRA		2.68	4.20	3.71	4.22
NRPB 2		2.83	3.79	3.40	4.22
PBI 1		3.13	4.40	3.22	4.42
PBI 3		2.89	4.47	3.31	4.65

88/R/RA/3

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

VARIETY	INSCTCDE	FUNGCIDE	VARIETY
			INSCTCDE
0.159	0.092	0.092	0.225
VARIETY	INSCTCDE	VARIETY	
FUNGCIDE	FUNGCIDE	INSCTCDE	
		FUNGCIDE	
		& EXTRA	
0.225	0.130	0.318	

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	24	0.318	8.5
GRAIN MEAN DM%	78.1		
PLOT AREA HARVESTED	0.00299		