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Yields of the Field Experiments 1993



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93/R/RAW/4 N, S and Glucosinolates - W. Oilseed Rape

Rothamsted Research

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93/R/RAW/4

WINTER OILSEED RAPE

N, S AND GLUCOSINOLATES

Object: To study the separate and combined effects of rates of nitrogen and sulphur on the quality and yield of three varieties of w. oilseed rape - Bones Close.

Sponsors: J.Fieldsend, H. Hutchings.

Design: 4 randomised blocks of 3 x 3 x 3 plots.

Whole plot dimensions: 3.0 x 21.0.

Treatments: All combinations of:-

VARIETY Varieties:

ARIANA Ariana FALCON Falcon TAPIDOR Tapidor

2. N Rates of nitrogen (kg N) in spring:

0 150 250

S Rates of sulphur (kg S) in spring:

0 50 100

NOTE: Sulphur was applied as gypsum (17.5% S).

Experimental diary:

27-Jul-92 : B : Shallow cultivated with Bomford Dynadrive.

28-Jul-92 : B : Rolled.

18-Aug-92 : B : Sting CT at 2.0 1 in 200 1.

20-Aug-92 : B : Ploughed, furrow pressed.

29-Aug-92 : T : VARIETY ARIANA, FALCON, TAPIDOR: Rotary harrowed. All varieties, dressed Lindex-Plus FS, drilled at 120

seeds per square metre.

: B : Rolled.

22-Oct-92 : B : Benazalox at 0.75 1 and Butisan S at 1.5 1 in 200 1.

22-Feb-93 : T : N 150, 250: 34.5% N at 145 kg.

24-Feb-93 : T : S 50: Gypsum at 284 kg.

: T : S 100: Gypsum at 568 kg.

15-Mar-93 : **T** : **N** 150: 34.5% N at 290 kg. : **T** : **N** 250: 34.5% N at 580 kg.

19-Jul-93 : B : Stefes Diquat at 3.0 1 with Vassgro Spreader at 0.40 1

in 400 1.

26-Jul-93 : B : Combine harvested.

93/R/RAW/4

Previous crops: W. barley 1991 and 1992.

NOTE: Seed samples were analysed for glucosinolate content.

GRAIN (AT 90% DM) TONNES/HECTARE

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

N	0	150	250	Mean
VARIETY				
ARIANA	3.10	3.23	3.09	3.14
FALCON	3.43	3.66	3.78	3.62
TAPIDOR	3.15	3.48	3.40	3.34
Mean	3.23	3.46	3.42	3.37
S	0	50	100	Mean
VARIETY				
ARIANA	3.13	3.08	3.22	3.14
FALCON	3.52	3.67	3.68	3.62
TAPIDOR	3.24	3.43	3.37	3.34
Mean	3.30	3.39	3.42	3.37
S	0	50	100	Mean
N				
0	3.21	3.23	3.24	3.23
150	3.36	3.52	3.49	3.46
250	3.31	3.43	3.53	3.42
Mean	3.30	3.39	3.42	3.37
	S		0 !	50 100
VARIETY	N			
ARIANA	0	3.1	9 2.	3.23
	150	3.1	7 3.3	34 3.19
	250	3.0	2 3.	00 3.24
FALCON	0	3.3	4 3.	42 3.52
	150	3.5	2 3.	3.67
	250	3.6	9 3.	79 3.85
TAPIDOR	0	3.1	1 3.	37 2.97
	150	3.3	9 3.	43 3.62
	250	3.2	3.	48 3.50

93/R/RAW/4

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

VARIETY	S	N	VARIETY
N			
0.113	0.065	0.065	0.065
	VARIETY	N	VARIETY
	N	S	S
	S		
	0 196	0 113	0 113

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

Stratum d.f. s.e. cv%

BLOCK.WP 78 0.277 8.2

GRAIN MEAN DM% 87.1

PLOT AREA HARVESTED 0.00483