

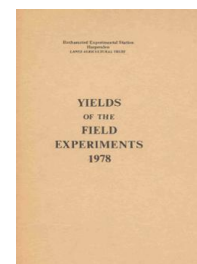
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78/R/B/4 and 78/W/B/4 Varieties and N - Barley

Rothamsted Research

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78/R/B/4 and 78/W/B/4

SPRING BARLEY

VARIETIES AND N

Object: To study the yields of some of the newer varieties of barley; a growth regulator and three rates of nitrogen are also tested - Rothamsted (R) Gt. Knott III and Woburn (W) Lansome III.

Sponsor: R. Moffitt.

Design: 2 randomised blocks of 2 whole plots split into 10 sub plots systematically split into 3 sub sub plots.

Whole plot dimensions: 42.7 x 20.1.

Treatments: All combinations of:-

Whole plots

- | | |
|-------------|---|
| 1. GRTH REG | Growth regulator: |
| NONE | None |
| MEP+ETH | Mepiquat chloride + ethephon ('BAS 09800W' at 2.0 l in 280 l) |

Sub plots

- | | |
|------------|------------|
| 2. VARIETY | Varieties: |
|------------|------------|

ARAMIR
ATHOS
GEORGIE
JULIA
JUPITER
LOFAABED
MALAABED
MINAK
PORTHOS
PRINTA

Sub sub plots

- | | |
|------|-----------------------------|
| 3. N | Nitrogen fertiliser (kg N): |
|------|-----------------------------|

38
75
113

Basal applications:

Gt. Knott III (R): Manures: (0:20:20) at 310 kg, combine drilled.
Weedkiller: Mecoprop, bromoxynil and ioxynil ('Brittox' at 2.5 kg in 220 l). Fungicide: Tridemorph at 0.53 kg applied with weedkiller.

78/R/B/4 and 78/W/B/4

Lansome III (W): Manures: (0:20:20) at 300 kg, combine drilled. Weedkiller: Mecoprop, bromoxynil and ioxynil ('Brittox' at 2.5 kg in 280 l). Fungicide: Tridemorph at 0.53 kg with weedkiller.

Seed: Gt. Knott III (R): Varieties sown at 160 kg.
Lansome III (W): Varieties sown at 160 kg.

Cultivations, etc.:-

Gt. Knott III (R): Ploughed: 25 Oct, 1977. Spring-tine cultivated: 11 Mar, 1978. Seed sown: 6 Apr. Test N applied: 17 May. Weedkiller and fungicide applied: 22 May. Growth regulator applied: 6 June. Combine harvested: 9 Sept. Previous crops: Wheat 1976, 1977.

Lansome III (W): Ploughed: 18 Nov, 1977. Spring-tine cultivated: 9 Mar, 1978. Test N applied, spring-tine cultivated with crumbler attached, seed sown: 29 Mar. Weedkiller and fungicide applied: 17 May. Growth regulator applied: 6 June. Combine harvested: 22 Aug. Previous crops: Potatoes 1976, barley 1977.

78/R/B/4 GT.KNOTT III (R)

GRAIN TONNES/HECTARE

***** TABLE OF MEANS *****

GRTH REG	NONE	MEP+ETH	MEAN	
VARIETY				
ARAMIR	6.43	6.36	6.39	
ATHOS	6.52	6.47	6.49	
GEORGIE	6.52	6.40	6.46	
JULIA	5.68	5.79	5.73	
JUPITER	6.11	6.41	6.26	
LOFAABED	5.96	6.37	6.16	
MALAABED	5.92	6.41	6.17	
MINAK	6.14	5.83	5.99	
PORTHOS	6.26	6.43	6.35	
PRINTA	5.47	5.76	5.62	
MEAN	6.10	6.22	6.16	
N	38	75	113	MEAN
VARIETY				
ARAMIR	6.05	6.94	6.19	6.39
ATHOS	5.91	6.70	6.88	6.49
GEORGIE	5.94	6.77	6.67	6.46
JULIA	5.66	5.65	5.88	5.73
JUPITER	5.94	6.44	6.39	6.26
LOFAABED	5.86	6.45	6.18	6.16
MALAABED	5.88	6.38	6.23	6.17
MINAK	6.04	6.08	5.84	5.99
PORTHOS	5.93	6.60	6.51	6.35
PRINTA	5.37	5.65	5.82	5.62
MEAN	5.86	6.37	6.26	6.16
N	38	75	113	MEAN
GRTH REG				
NONE	5.70	6.28	6.32	6.10
MEP+ETH	6.01	6.45	6.20	6.22
MEAN	5.86	6.37	6.26	6.16

78/R/B/4 GT.KNOTT III (R)

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

GRTH REG	VARIETY	N	38	75	113	
NONE	ARAMIR		5.97	7.11	6.21	
	ATHOS		5.93	6.69	6.95	
	GEORGIE		5.74	6.88	6.94	
	JULIA		5.63	5.55	5.85	
	JUPITER		5.61	6.36	6.35	
	LOFAABED		5.67	6.22	6.01	
	MALAABED		5.55	5.77	6.45	
	MINAK		6.04	6.26	6.13	
	PORTHOS		5.69	6.55	6.56	
	PRINTA		5.20	5.48	5.73	
	MEP+ETH	ARAMIR		6.13	6.78	6.18
		ATHOS		5.89	6.71	6.80
		GEORGIE		6.14	6.66	6.41
		JULIA		5.69	5.76	5.92
JUPITER			6.27	6.52	6.44	
LOFAABED			6.06	6.68	6.36	
MALAABED			6.21	7.00	6.02	
MINAK			6.04	5.91	5.55	
PORTHOS			6.18	6.65	6.46	
PRINTA			5.55	5.82	5.92	

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	VARIETY	N	GRTH REG*
			VARIETY
SED	0.201	0.130	0.284
TABLE	GRTH REG*	VARIETY	GRTH REG*
	N	N	VARIETY
			N
SED	0.184	0.291	0.411
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY		0.245	
N		0.269	
GRTH REG.VARIETY			0.347
GRTH REG.N			0.380

* WITHIN SAME LEVEL OF GRTH REG ONLY

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP.COLSP	18	0.284	4.6
BLOCK.WP.ROWSP	4	0.184	3.0
BLOCK.WP.COLSP.ROWSP	36	0.310	5.0

GRAIN MEAN DM% 81.5

SUB PLOT AREA HARVESTED 0.00130

78/W/B/4 LANSOME III (W)

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

GRTH REG VARIETY	NONE	MEP+ETH	MEAN	
ARAMIR	4.62	4.66	4.64	
ATHOS	4.36	4.83	4.60	
GEORGIE	4.08	4.99	4.53	
JULIA	3.53	4.29	3.91	
JUPITER	4.23	4.96	4.59	
LOFAABED	4.03	4.51	4.27	
MALAABED	4.05	4.49	4.27	
MINAK	4.49	4.95	4.72	
PORTHOS	4.54	4.82	4.68	
PRINTA	4.44	4.70	4.57	
MEAN	4.24	4.72	4.48	
N VARIETY	38	75	113	MEAN
ARAMIR	3.47	4.97	5.48	4.64
ATHOS	3.47	4.93	5.39	4.60
GEORGIE	3.22	4.90	5.48	4.53
JULIA	2.91	4.15	4.67	3.91
JUPITER	3.47	4.87	5.43	4.59
LOFAABED	3.39	4.40	5.02	4.27
MALAABED	3.48	4.18	5.15	4.27
MINAK	3.51	4.86	5.79	4.72
PORTHOS	3.58	4.93	5.52	4.68
PRINTA	3.65	4.71	5.35	4.57
MEAN	3.42	4.69	5.33	4.48
N GRTH REG	38	75	113	MEAN
NONE	3.06	4.49	5.15	4.24
MEP+ETH	3.77	4.88	5.51	4.72
MEAN	3.42	4.69	5.33	4.48

78/W/B/4 LANSOME III (W)

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

GRTH REG	VARIETY	N	38	75	113	
NONE	ARAMIR		3.46	4.83	5.57	
	ATHOS		3.24	4.68	5.17	
	GEORGIE		2.71	4.37	5.15	
	JULIA		2.40	3.90	4.29	
	JUPITER		3.02	4.67	4.99	
	LOFAABED		2.98	4.08	5.02	
	MALAABED		3.08	4.03	5.04	
	MINAK		3.15	4.59	5.74	
	PORTHOS		3.28	4.97	5.36	
	PRINTA		3.32	4.82	5.18	
	MEP+ETH	ARAMIR		3.47	5.10	5.40
		ATHOS		3.71	5.19	5.60
		GEORGIE		3.73	5.42	5.80
JULIA			3.42	4.40	5.05	
JUPITER			3.92	5.08	5.87	
LOFAABED			3.79	4.71	5.01	
	MALAABED		3.88	4.32	5.27	
	MINAK		3.87	5.12	5.85	
	PORTHOS		3.87	4.89	5.69	
	PRINTA		3.98	4.59	5.53	

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	VARIETY	N	GRTH REG* VARIETY
SED	0.341	0.162	0.482

TABLE	GRTH REG* N	VARIETY N	GRTH REG* VARIETY N
SED	0.229	0.415	0.587
EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:			
VARIETY		0.271	
N		0.389	
GRTH REG.VARIETY			0.383
GRTH REG.N			0.550

* WITHIN SAME LEVEL OF GRTH REG ONLY

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP.COLSP	18	0.482	10.8
BLOCK.WP.ROWSP	4	0.229	5.1
BLOCK.WP.COLSP.ROWSP	36	0.324	7.2

GRAIN MEAN DM% 79.2

SUB PLOT AREA HARVESTED 0.00173