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86/R/RA/5 Precision Sowing - W. Oilseed Rape

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86/R/RA/5

WINTER OILSEED RAPE

PRECISION SOWING

Object: To compare two precision drills with a conventional machine at two seed rates on two sowing dates with and without an insecticide - Little Hoos.

Sponsor: D.P. Yeoman.

Design: 2 replicates of 3 x 2 x 2 x 2 arranged in 4 blocks of 12 plots.

Whole plot dimensions: 3.0 x 15.0.

Treatments: All combinations of:-

1. DRILL Drills used to sow seed:

CNVNTIAL	Conventional, sown in rows 17.6 cm apart, seeds randomly spaced
MONOCENT	Monocentra, sown in rows 25 cm apart, seeds precisely spaced
STANHAY	Stanhay, sown in rows 25 cm apart, seeds precisely spaced

2. SOW DATE Dates of sowing:

22 AUG	22 August, 1985
6 SEP	6 September

3. SEEDRATE Seed rates:

4 KG
8 KG

4. INSC TCDE Insecticide:

NONE	None
DELTAMET	Deltamethrin at 0.0075 kg in 220 l on 30 Oct, 1985

NOTES: (1) For the Monocentra drill the seed within the row was spaced at 5.5 cm for the 4 kg seed rate and 2.7 cm for the 8 kg seed rate.

(2) For the Stanhay drill the seed within the row was spaced at 4.8 cm for the 4 kg seed rate and 2.8 cm for the 8 kg seed rate.

Basal applications: Manures: 'Nitro-Chalk' at 180 kg. 'Nitram' at 720 kg. Weedkillers: Fluazifop-P-butyl at 0.19 kg with a wetting agent ('Agral' at 0.28 l) in 280 l. Propyzamide and clopyralid (as 'Matrikerb' at 1.6 kg) in 500 l. Fungicides: Prochloraz at 0.50 kg in 200 l on two occasions. Iprodione at 0.50 kg in 500 l. Desiccant: Diquat at 0.60 kg ion with a wetting agent ('Agral' at 0.50 l) in 500 l.

Seed: Bienvenu, dressed gamma HCH, thiram and fenpropimorph.

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Cultivations, etc.:- Rotary grubbed: 17 Aug, 1985. 'Nitro-Chalk' applied: 20 Aug. Discd, spring-tine cultivated, SOWDATE 22 AUG seed sown: 22 Aug. SOWDATE 6 SEPT seed sown: 6 Sept. Fluazifop-P-butyl with wetting agent applied to SOWDATE 22 AUG plots: 26 Sept and to SOWDATE 6 SEPT plots: 17 Oct. First prochloraz applied: 12 Dec. 'Matrikerb' applied: 19 Dec. 'Nitram' applied: 12 Mar, 1986. Second prochloraz applied: 19 May. Iprodione applied: 25 June. Desiccant with wetting agent applied: 24 July. Combine harvested: 4 Aug. Previous crops: W. wheat 1984, w. barley 1985.

NOTE: Plant counts were made at establishment and again at the end of April.

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

SOWDATE	22 AUG	6 SEP	MEAN
DRILL			
CNVNTIAL	4.29	3.93	4.11
MONOCENT	4.32	3.96	4.14
STANHAY	4.30	3.67	3.98
MEAN	4.30	3.85	4.08
SEEDRATE	4 KG	8 KG	MEAN
DRILL			
CNVNTIAL	4.09	4.13	4.11
MONOCENT	4.10	4.18	4.14
STANHAY	3.93	4.03	3.98
MEAN	4.04	4.11	4.08
SEEDRATE	4 KG	8 KG	MEAN
SOWDATE			
22 AUG	4.26	4.35	4.30
6 SEP	3.83	3.88	3.85
MEAN	4.04	4.11	4.08
INSCTCDE	NONE	DELTAMET	MEAN
DRILL			
CNVNTIAL	4.09	4.13	4.11
MONOCENT	4.15	4.13	4.14
STANHAY	3.96	4.00	3.98
MEAN	4.07	4.09	4.08
INSCTCDE	NONE	DELTAMET	MEAN
SOWDATE			
22 AUG	4.31	4.29	4.30
6 SEP	3.83	3.88	3.85
MEAN	4.07	4.09	4.08

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GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

INSC TCDE	NONE	DELTAMET	MEAN		
SEEDRATE					
4 KG	4.07	4.01	4.04		
8 KG	4.07	4.16	4.11		
MEAN	4.07	4.09	4.08		
SOWDATE	22 AUG		6 SEP		
SEEDRATE	4 KG	8 KG	4 KG	8 KG	
DRILL					
CNVNTIAL	4.25	4.34	3.93	3.92	
MONOCENT	4.29	4.34	3.92	4.01	
STANHAY	4.23	4.36	3.63	3.70	
SOWDATE	22 AUG		6 SEP		
INSC TCDE	NONE	DELTAMET	NONE	DELTAMET	
DRILL					
CNVNTIAL	4.42	4.17	3.76	4.09	
MONOCENT	4.20	4.44	4.11	3.82	
STANHAY	4.33	4.27	3.60	3.74	
SEEDRATE	4 KG		8 KG		
INSC TCDE	NONE	DELTAMET	NONE	DELTAMET	
DRILL					
CNVNTIAL	4.10	4.08	4.08	4.18	
MONOCENT	4.12	4.08	4.18	4.17	
STANHAY	3.99	3.88	3.94	4.13	
SEEDRATE	4 KG		8 KG		
INSC TCDE	NONE	DELTAMET	NONE	DELTAMET	
SOWDATE					
22 AUG	4.31	4.20	4.31	4.38	
6 SEP	3.83	3.83	3.82	3.94	
DRILL	SEEDRATE	4 KG		8 KG	
	INSC TCDE	NONE	DELTAMET	NONE	DELTAMET
	SOWDATE				
CNVNTIAL	22 AUG	4.38	4.11	4.45	4.23
	6 SEP	3.82	4.05	3.71	4.14
MONOCENT	22 AUG	4.14	4.44	4.25	4.43
	6 SEP	4.11	3.72	4.12	3.91
STANHAY	22 AUG	4.41	4.06	4.25	4.48
	6 SEP	3.57	3.70	3.63	3.77

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GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

TABLE	DRILL	SOWDATE	SEEDRATE	INSCTCDE
SED	0.084	0.069	0.069	0.069
TABLE	DRILL SOWDATE	DRILL SEEDRATE	SOWDATE SEEDRATE	DRILL INSCTCDE
SED	0.119	0.119	0.097	0.119
TABLE	SOWDATE INSCTCDE	SEEDRATE INSCTCDE	DRILL SOWDATE SEEDRATE	DRILL SOWDATE INSCTCDE
SED	0.097	0.097	0.168	0.168
TABLE	DRILL SEEDRATE INSCTCDE	DRILL* SOWDATE SEEDRATE INSCTCDE		
SED	0.168	0.238		

* WITHIN THE SAME LEVEL OF SOWDATE.SEEDRATE.INSCTCDE ONLY

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

STRATUM	DF	SE	CV%
BLOCK.WP	22	0.238	5.8

GRAIN MEAN DM% 82.2

PLOT AREA HARVESTED 0.00347