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Yields of the Field Experiments 1986

Full Table of Content

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

Rothamsted Research

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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.INSCTCDE	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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86/R/RA/5

Cultivations, etc.:- Rotary grubbed: 17 Aug, 1985. 'Nitro-Chalk' applied: 20 Aug. Disced, 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 DRILL	22 AUG	6 SEP	MEAN
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 DRILL	4 KG	8 KG	MEAN
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 SOWDATE	4 KG	8 KG	MEAN
22 AUG	4.26	4.35	4.30
6 SEP	3.83	3.88	3.85
MEAN	4.04	4.11	4.08

INSCTCDE DRILL	NONE	DELTAMET	MEAN
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 SOWDATE	NONE	DELTAMET	MEAN
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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86/R/RA/5

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

INSCTCDE	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	
INSCTCDE	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	
INSCTCDE	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	
INSCTCDE	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

SEEDRATE	4 KG		8 KG	
INSCTCDE	NONE	DELTAMET	NONE	DELTAMET
DRILL 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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86/R/RA/5

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

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