

CONFIDENTIAL*

MORLEY RESEARCH CENTRE

Spring oilseed rape

Seedrates for spring rape

G M Palmer and D B Stevens

Summary

Yields increased with increasing plant density up to 140 plants/m², the highest populations established at a heavy land site in Suffolk. This trend was similar in Mars and Sponser, two examples of current varieties of spring oilseed rape.

Object

To evaluate the effects of plant density on the performance of new high yielding spring varieties.

Method

Treatments

All combinations of:

<i>Seedrate</i>	<i>Variety</i>
63 seeds/m ² (target 40 plants/m ²)	Mars
127 seeds/m ² (target 80 plants/m ²)	Sponser
190 seeds/m ² (target 120 plants/m ²)	
254 seeds/m ² (target 160 plants/m ²)	
317 seeds/m ² (target 200 plants/m ²)	
381 seeds/m ² (target 240 plants/m ²)	

The treatments were arranged in randomised blocks with 4 replicates.

Plots were sown on 26 April into a moderately good seedbed prepared by power-harrow on ploughed land at a heavy soil site at Mickfield in Suffolk using an Oyjord plot drill. The plots were rolled after drilling and received normal farm inputs of fertiliser, herbicides and pesticides applied overall. The trial was harvested by combine on 22 August.

*Not for publication without the Director's consent. This report deals primarily with only one year's work, so any conclusions given are provisional.

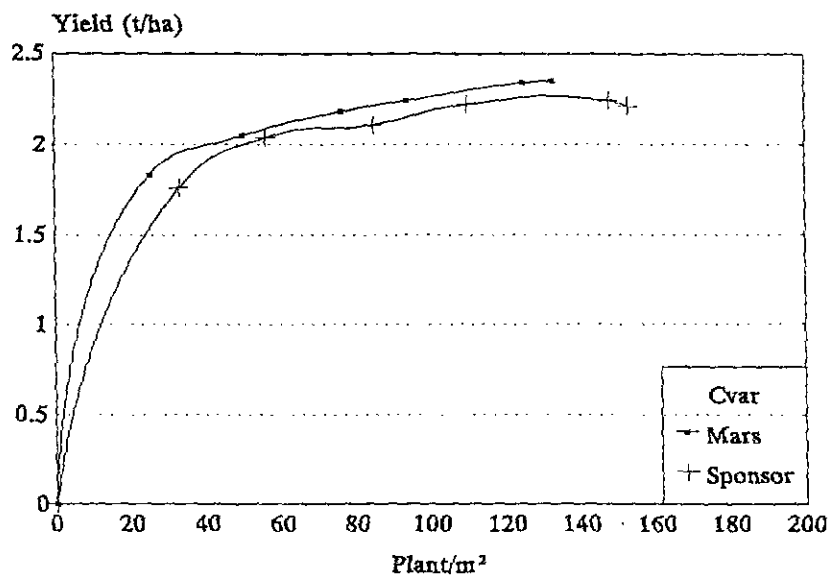
Results and discussion

Crop emergence was slow in the dry conditions which followed drilling and establishment was fairly low, averaging only 41% of seed sown. At this site Sponser gave significantly better establishment than Mars.

Yields

Seedrates		Yield (t/ha at 91% dm)		
Nos.seeds/m ²	Av.plant popn./m ²	Mars	Sponser	Mean
63	29	1.83	1.76	1.79
127	53	2.05	2.04	2.04
190	80	2.18	2.11	2.15
254	102	2.24	2.22	2.23
317	139	2.34	2.21	2.28
381	141	2.35	2.24	2.30
LSD			0.154	0.109
Mean		2.16	2.10	
LSD			0.063	
SE per plot (21 df)			±0.091	
SE as %GM			4.2	

Yields were about average for spring rape. Overall, yield tended to increase with increasing plant density, this applied to both varieties and is well illustrated in the following graph.



Plant populationsTable 1. Plants/m² (9 June)

Seedrates Nos.seeds/m ²	Mars	Sponser	Mean
63	25	33	29
127	50	56	53
190	76	85	80
254	94	111	102
317	125	153	139
384	133	148	141
LSD		19.9	14.0
Mean	84	98	
LSD		8.1	
SE per plot		±11.7	
SE as %GM		12.9	