

**\*CONFIDENTIAL**

**MORLEY RESEARCH CENTRE**

NAS 939 LL 1992

(1st year)

**Experiment report**

**Crop**            Linseed

**Title**            Seed rates for Antares and Barbara

**Summary**

A trial carried out on a light sandy soil with two varieties of linseed grown at a range of plant populations showed that yield increased with increasing plant density up to approximately 300/m<sup>2</sup>.

**Manager**        G M Palmer

**Object**          To determine the optimum plant density for linseed grown on light land

**Site**            H. Edwards, Hardingham Hall, Hardingham, Norfolk

**Method**

**Treatments**

All combinations of:

**Seedrates**

	seeds/m <sup>2</sup>	kg/ha	
	214	19	(target population = 150 plants/m <sup>2</sup> )
	357	31	(target population = 250 plants/m <sup>2</sup> )
	500	44	(target population = 350 plants/m <sup>2</sup> )
	643	56	(target population = 450 plants/m <sup>2</sup> )
	857	75	(target population = 600 plants/m <sup>2</sup> )
	1143	100	(target population = 800 plants/m <sup>2</sup> )

**Variety**

- Antares
- Barbara

**Layout**          Factorial in 4 randomised blocks

\*Not for publication without the Director's consent.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

## Results and discussion

Table 1. *Plant populations (/m<sup>2</sup>)*

Seedrate (seeds/m <sup>2</sup> )	Antares	Barbara	Mean
214	129	115	122
357	202	180	191
500	299	290	295
643	350	321	336
857	419	442	431
1143	573	546	560

Table 2. *Grain yield (t/ha at 91% dm)*

Seedrate (seeds/m <sup>2</sup> )	Antares	Barbara	Mean
214	1.35	1.52	1.43
357	1.78	1.62	1.70
500	1.85	1.98	1.92
643	1.93	2.16	2.04
857	1.93	2.22	2.08
1143	1.96	2.16	2.06
LSD		0.261	0.184
Mean	1.80	1.94	
LSD		0.106	

SE per plot (33 df) ±0.181 or 9.7% GM

The experiment was redrilled on 7 May after poor establishment following the initial sowing on 19 March. Plant populations (Table 1) showed an average final establishment of 54% of seed sown compared with 70% expected. The range of populations achieved adequately spanned the optimum at this site.

The average yields (Table 2) for both varieties increased significantly with increasing plant density up to 290-299/m<sup>2</sup>. The response was similar for both Antares and Barbara.

### Acknowledgements

We are indebted to Mr H Edwards the host farmer for his help in the conduct of this experiment.

### Appendix

Details of plant structure including number of capsules per plant and number seeds per capsule and field and experiment diary are available on request.