

\*CONFIDENTIAL

MORLEY RESEARCH CENTRE

**Winter oilseed rape**

**Seed treatment observation plots**

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**Summary**

There was no significant effect on seedling vigour, establishment or yield from seed treated with Lindex Plus FS in a season with adequate moisture for rapid germination.

**Object**

To evaluate the effects of seed treatment on seedling emergence, crop growth and yield.

**Method**

**Treatments**

All combinations of:

**Varieties**

Apache  
Inca

**Seed treatment**

Nil  
Lindex Plus FS (fenpropimorph + HCH + thiram; 43 + 545 + 73 g ai/l)  
applied at the recommended dose.

A single cleaned and untreated seed lot of each variety was split into two parts, one part was left untreated and the other part was given a standard dressing with a combined fungicide and insecticide material.

The seed was then sown on 9 September, 1992, at a rate of 170 seeds/m<sup>2</sup> through an Oyjord plot drill in conventional small plots on a heavy land site in Suffolk. Observations were made of crop emergence and establishment in the autumn. The trial was harvested by combine on 30 July 1993.

The treatments were arranged in randomised blocks with 6 replicates.

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\*Not for publication without the Director's consent.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

Seedbed moisture was boosted by a substantial amount of rainfall in the first 14 days after drilling (a total of 60.3 mm was recorded at Morley in this period).

Crop emergence was rapid and even across the trial site and no treatment differences were observed. There were no significant differences between treatments in plant populations established or in final yields.

Table 1. *Plant population, 16 October (/m<sup>2</sup>) and yield (t/ha at 91% dm)*

Variety	Seed treatment		Mean
	Untreated	Treated	
<i>Plant population</i>			
Apache	120	118	119
Inca	132	117	124
LSD	NS		NS
Mean	126	117	
LSD	NS		
SE per plot(15 df)	±22.2		
SE as %GM	18.2		
<i>Yield</i>			
Apache	4.53	4.59	4.56
Inca	4.88	4.66	4.77
LSD	NS		NS
Mean	4.71	4.62	
LSD	NS		
SE per plot(15 df)	±0.335		
SE as %GM	7.2		

### **Acknowledgements**

The authors wish to express their thanks for the help received from the host farmer, W. Hamilton, and from colleagues at Morley in carrying out this trial.

### **Appendix**

The following information is available on request:

Field details  
Method and Experiment diary

## Field details

**Site:** W. Hamilton, Rosery Farm, Little Stonham, Suffolk  
**Field reference:** O3  
**Crop:** Winter oilseed rape, cv as treatments  
**Previous crop:** 1992 W. wheat  
 1991 W. wheat  
**Soil type and series:** Sandy clay loam (Beccles series)  
**Seed:** Commercial **Seedrate:** 170 seeds/m<sup>2</sup> (appx 7 kg/ha)  
**Date sown:** 9 September  
**Nutrients applied:**

Date		Rate (kg/ha)
16 September 1992	K <sub>2</sub> O	150
6 November	N	46
10 February	N	30
16 February	N	30

  
**Cultivations:**

Late August	Ploughed and pressed, rolled
7 September	Power harrow (x1)
8 September	Drilled
10 September	Rolled

  
**Applications to crop:** Confidential - normal farm inputs for a high yielding crop.

## **Method**

These are an abbreviated version of the Standard Operating Procedures used at Morley Research Centre.

### **Plot layout**

Plots were sown at 170 seeds/m<sup>2</sup> with an Oyjord drill. The drilled plots were 12 m long and 1.66 m wide from outside row to outside row (14 rows at 12.8 cm spacing). Plots were separated by a buffer of the same size with a 59 cm gap between successive plots and buffers. This gave an effective plot width of 2.25 m, which was used for harvest yield calculations. Trial treatments were applied to the plot and to part of the buffer at each side.

Common treatments such as fertiliser, fungicides, insecticides, and herbicides were applied across all plots with farm machinery using wheelings, 12 m apart. For harvest purposes, plot length was reduced to 9.0 m.

### **Seed treatment details**

The seed treatment was applied at NIAB using a standard dresser at the approved rate.

### **Agronomic factors**

Overall plant population was determined by making 6 counts of 50 cm x 50 cm square quadrat at random across each plot.

### **Harvest details**

Plots were harvested using a Claas Compact combine which was modified for plot work and used electronic weighing (Novatech M864 Loadmeter). Trials were harvested by replicate.

### **Post harvest determinations**

Moisture content was determined by taking a 200 g subsample, oven drying for 40 hours at 100 -102° C and weighing at ambient temperature.

**Experiment diary**

<b>Date</b>	<b>Operation</b>
9 September 1992	Trial drilled
12 September	Trial rolled (dry conditions prevailing)
16 October	Rape population counts made
8 July	Desiccant (Roundup) applied
26 July	Trial harvested