

MORLEY RESEARCH CENTRE

The interaction of seed rate and variety in durum wheat

Ron Stobart

Summary

Three varieties of durum wheat (Exeldur, Tetratur and Lloyd) were drilled at four seed rates (350, 450, 550 and 650 seeds/m²) on 14 November 2000 and grown as a first cereal after sugar beet on the loamy sand soil at West Barsham, Norfolk. Soil conditions were very wet at drilling and afterwards, with 108 and 104 mm rain in October and November respectively recorded at Morley. After the trial was drilled, it was not possible for the farm to drill the surrounding crop. Plants started to emerge but were immediately subject to intense grazing from rabbits, game birds and a flock of geese. It was not possible to make any emergence counts and as a result of continued grazing, the trial was abandoned. The trial was not repeated in subsequent years.

Object

To examine the interaction of seed rate and variety in durum wheat.

Method

<i>Site</i>	Keith Farm Partnership, West Barsham, Norfolk
<i>Soil type and series</i>	Loamy sand (Fakenham series)
<i>Variety</i>	See treatments
<i>Treatments</i>	Details of treatments are given in Table 1
<i>Sowing date</i>	14 November 2000
<i>Husbandry</i>	Normal farm inputs
<i>Trial design</i>	Factorial with four randomised blocks
<i>Analysis</i>	ANOVA with LSD's quoted at P = 0.05
<i>Plot size</i>	12 m x 2.1 m with buffers
<i>Application</i>	No treatments were applied after drilling
<i>Experiment diary</i>	See Appendix
<i>Deviations from protocol</i>	<ul style="list-style-type: none">• Trial was abandoned

Morley Research Centre

*Not for publication without the consent of the Director of Morley Research Centre.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

Results

Table 1. *Treatments of variety and seed rate drilled on 14 November 2000*

Treatment number	Variety	Seed rate (seeds/m ²)
1.	Exeldur	350
2.	Exeldur	450
3.	Exeldur	550
4.	Exeldur	650
5.	Tetradur	350
6.	Tetradur	450
7.	Tetradur	550
8.	Tetradur	650
9.	Lloyd	350
10.	Lloyd	450
11.	Lloyd	550
12.	Lloyd	650

- The crop followed sugar beet and was drilled on 14 November 2000.
- Soil conditions were very wet at drilling and afterwards (108 and 104 mm rain in October and November 2000 respectively at Morley) and it was not possible for the farm to drill the surrounding crop once the trial had been drilled. Plants started to emerge but were subject to intense grazing from rabbits, game birds and a flock of geese. As a result, the trial had to be abandoned and it was not repeated in subsequent years.

Further details

Other experiment details and results are presented in the appendix.

Field details

Applications to crop

Experiment diary

Method

Field details

Site	Keith Farm Partnership, West Barsham, Norfolk
Crop	Durum wheat
Variety	See treatments
Previous crop	2000 Sugar beet 1999 Winter barley
Soil type and series	Loamy sand (Fakenham series)
Seed rate	See treatments
Date sown	14 November 2000

Applications to crop

No treatments were applied.

Experiment diary

Date	GS	Treatments applied or action
14 November 2000		Trial drilled using Oyjord plot drill

Spray and assessment methods for cereal trials

This is an abbreviated version of the standard operating procedures used at Morley Research Centre.

Plot layout

Plots were sown at 400 seeds/m² with an Oyjord drill. The drilled plots were 12 m long and 1.56 m wide from outside row to outside row (14 rows at 12.0 cm spacing). Plots were separated by a 54 cm gap between successive plots. This gave an effective plot width of 2.10 m.