

Trial 7: Spring Sown Barley seed rate trial

Objective: Evaluate whether higher seeding rates are required for spring sown barley to increase head number and yield

Key Points:

- A low seed density of 100 seeds/m² yielded 0.5 t/ha less than the current recommended rate for spring sown barley (300 seeds/m²)
- Seeding rates greater than 200 seeds/m² up until 500 seeds/m² did not result in additional yield or quality responses.
- Lodging was not exacerbated by higher seeding densities
- These results confirm growers can continue to target current recommended seed densities of 300 seeds/m² for spring sown barley

Treatments: Five seed rate treatments

Table 1. Influence of plant population) on grain yield (t/ha) and grain quality.

	Seed rate	Yield	% of Mean	Protein	Test weight	Retention	Screenings
Trt.	Seeds/m ²	t/ha	%	(%)	(kg/HL)	(%)	(%)
1	100	9.42 b	95.8	12.9 -	67.0 b	98.9 b	0.2 -
2	200	9.82 ab	99.8	13.2 -	67.4 ab	99.2 a	0.1 -
3	300	9.99 a	101.6	12.6 -	67.5 ab	99.2 a	0.1 -
4	400	9.85 ab	100.2	13.0 -	67.5 ab	99.1 a	0.1 -
5	500	10.10 a	102.7	12.9 -	67.6 a	99.2 a	0.2 -
Mean		9.83	100.0	12.9	67.4	99.1	0.2
LSD (p=0.05)		0.50	5.1	0.7	0.5	0.2	0.1
P Val		0.093	0.093	0.549	0.208	0.095	0.448

Yield figures followed by the same letter are not considered to be statistically different (p=0.05).

Plot yields: To compensate for edge effect a full row width (22.5cm) has been added to either side of the plot area (equal to plot centre to plot centre measurement in this case).

Table 2. Details of the management levels (kg, g, ml/ha).

Varieties:		RGT Planet
Sowing date:		1-September
Seed Rate:		As per treatment list
Sowing Fertiliser:		100kg/ha MAP
Seed Treatment:		Vibrance & Gaucho
Nitrogen:	2 Oct	115kg N/ha
Fungicide:	5 Nov	Radial 840ml/ha
	26 Nov	Prosaro 300ml/ha
Irrigation:		17 Sep 12.5mm, 14 Nov 20.0mm, 20 Nov 18.0mm, 27 Nov 20mm, 17 Dec 10.0mm = Total 80.5mm