

3.3.3 BARLEY GROWTH REGULATOR TRIAL (GNARWARRE)

Location: "South Roxby" Gnarwarre

Researchers:

Col Hacking, Dominic Bolton, Wes Arnott, *SFS Ltd.*
Nick Pyke, *FAR Lincoln New Zealand*
Peter O'Loughlin, Steve Dickson, *Agvise Services*

Background:

Barley has a tendency to lodge when grown under good rainfall conditions and when coupled to high nitrogen soils and early sowing. This is particularly the case for the variety Gairdner, which is the preferred variety in SW Victoria.

Take Home Messages:

- Growth regulators had no effect on reducing crop lodging, since crop lodging was not evident due to seasonal conditions and low soil nitrogen levels.
- Some growth regulators had an effect on reducing plant height.
- Growth regulators had no effect on barley yield or grain quality.

Aim:

To determine the effect of growth regulators on plant height and lodging tendency
To measure the effect of growth regulators on grain yield and grain quality

Trial Design: 9 treatments * 1 variety * 4 reps.
Plot length 13m

Variety: Gairdner

Sowing Rate: 120 kg/ha

Sowing Date: 6th June 2002

Fertiliser: 100 kg/ha Granulock 15 at sowing
100 kg/ha Urea applied on 21/08/02

Spray Dates:

- GS22 on 8th August 2002 Good conditions small amount of drift.
- GS31-32 on 5th September 2002. Windy spray conditions, some drift. Crop advancing quickly and had to spray.

Table 26: Treatment List

Treat-ment		GS22	GS31		Yield kg/ha	Height cm	Protein %
1	Control				5,909	68.13	9.300
2	1 L/ha Chlormequat	Yes			5,967	63.75	8.925
3	2 L/ha Chlormequat	Yes			5,938	66.25	8.725
4	200 ml/ha Modus		Yes		5,372	61.25	9.825
5	400 ml/ha Modus		Yes		5,325	60.00	8.925
6	600 ml/ha Modus		Yes		5,456	63.13	9.225
7	Control				5,429	65.63	9.125
8	Multi 1	1.5 L/Ha Chlormequat ¹¹	200 ml/ha Modus		6,163	63.75	9.375
9	200 ml/ha Modus		Yes		5,074	64.08	9.175
LSD					1,006	6.97	0.9435
CV					12.01	7.25	6.79

¹¹ Chlormequat contains 780 g/L chlormequat chloride.

Discussion:

Given that the season was a fairly tough one and that perhaps the site was initially quite low in nitrogen at sowing, the crop did not grow very tall and there was no lodging evident. In this situation, growth regulators would have no benefit. None of the growth regulators gave any yield benefit over the control treatments (1 & 7)

Some of the treatments did have an effect on reducing plant height, particularly Modus.

There was no effect on grain protein and test weight through the use of the growth regulators.