

Row Crops

Yield Improvement Programme



Trials on canola, wheat, barley and lentils in Australia have shown a significant increase in yield using the BioStart biostimulant programme. BioStart biostimulant products are easy-to-apply and can be co-applied with other products reducing the cost of implementing the programme into an existing broadacre programme.

Mycorrcin is a soil biostimulant that activates beneficial soil microbes that improve soil structure (improving soil water absorption, retention and drainage), and stimulates healthy root growth leading to enhanced nutrient uptake, faster crop establishment and improved yields
1 L Mycorrcin was applied through direct injection at sowing for all 4 crops.

Foliacin is a foliar-applied biostimulant with a dual mode of action: it restores the foliar biofilm and activates the plant's immune system so the plant is resilient to chemical and environmental stress such as spray drift, drought and heat.

0.5 L/ha of Foliacin was applied at canopy closure with a cover spray on lentils only.

Trials were run by independent trial organisations (SLR in WA and YPAG in SA) or by growers.

Results

All trials showed an improvement in yield.

Parameter	Canola	Lentils	Wheat	Barley
Yield Increase (%)	10%	10%	11%	9%
Yield increase (T/ha)	0.22	0.21	0.46	0.60
Increased GM (\$/ha)	\$152	\$160	\$158	\$203
ROI	662%	299%	688%	909%
Price (\$/T)	\$680	\$755	\$430	\$340
Programme cost (\$/ha)	\$20	\$40	\$20	\$20

Table 1. Impact of applying BioStart biostimulant programme to Australian broadacre crops.



Figure 1. Yield increase in response to applying BioStart biostimulant programme.

In canola yield was increased by an average of 10% in 4 independent trials conducted over two low rainfall seasons. This increased the gross margin by \$152/ha and is equivalent to a 662% return on investment (ROI).

In wheat yield was increased by an average of 11% in 3 independent trials conducted over two low rainfall seasons. This increased the gross margin by \$158/ha and is equivalent to a 688% return on investment (ROI).

In barley yield increased by 9% in 1 independent trial conducted in a low rainfall seasons. This increased the gross margin by \$203/ha and is equivalent to a 909% return on investment (ROI).

For lentils yield increased by an average of 10% in 7 independent trials conducted over three low rainfall seasons. This increased the gross margin by \$160/ha and is equivalent to a 299% return on investment (ROI).

Conclusion: The BioStart biostimulant programme increased yield in wheat, barley, lentils and canola by 9-11% and provided a positive ROI in four different states in Australia across 2 challenging growing seasons.