

Innovative trial design for variety yield comparisons

The Hyola Innovation Systems trials utilise a unique design that allows different herbicide tolerant varieties, including all non-Pacific Seed varieties, to be grown together, by employing strategic statistical controls of unique Pacific Seeds varieties that contain triple herbicide stacked technology, allowing applications of the registered herbicides associated with triazine tolerant, Clearfield® and TruFlex® with Roundup Ready® Technology systems.

This innovative approach, combined with powerful statistical analysis from the University of Wollongong, produces reliable and meaningful results that make it possible for growers and advisors to compare variety performance across multiple herbicide tolerant systems. These trials provide accurate and reliable industry information for variety comparisons in an individual single site growing environment.

How to compare variety performance

- 1 The x-axis shows the yield (t/ha) ranked from high to low, left to right for each variety listed in the column.
- **02** To compare two varieties
 - a Find the row with the variety you're interested in and compare it to a column with another variety
 - **b** The colour of the square where the row and column intersect tells you if there is a significant difference in yield
 - A red square means there's no significant difference
 - A green square means there is a significant difference
 - A blue square means that the variety wasn't grown at the trial site, so only predicted* yields are available.

- Dr Alison Smith, Principal Research Fellow, University of Wollongong

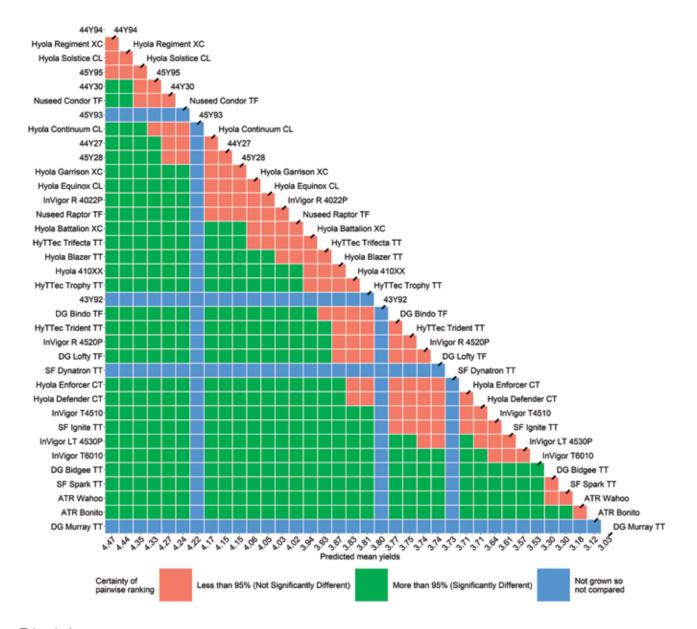




^{*}The research study used a factor analytic linear mixed model to calculate predicted yields for blue squares. The factor analytic linear mixed model breaks down complex data sets into hidden variables called "factors" that reflect characteristics of the growing environments. This method reduces uncertainty and makes better predictions by borrowing information from a population model.

Trial ID 22STSYTL56_WGN

Nearest Town	Yealering (WA)
Sowing Date	14/05/2022
Growing season rainfall mm (April-Nov)	Nearest Bureau of Meteorology station - 323.8
Crop Rotations (2019/2020/2021)	NA/NA/Wheat
Soil pH (H ₂ O / CaCl ₂)	5.5 / 4.9



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