

UNFS YIELD PROPHET® SIMULATIONS 2026



LOCATION: LAURA



The 2026 Laura Yield Prophet site was established on a reddish-brown alkaline loam topsoil over a red alkaline clay loam subsoil with slight sodicity and salinity at depth.

The site received 50mm in February and 35mm in March, followed by 80 mm of growing season rainfall to date.

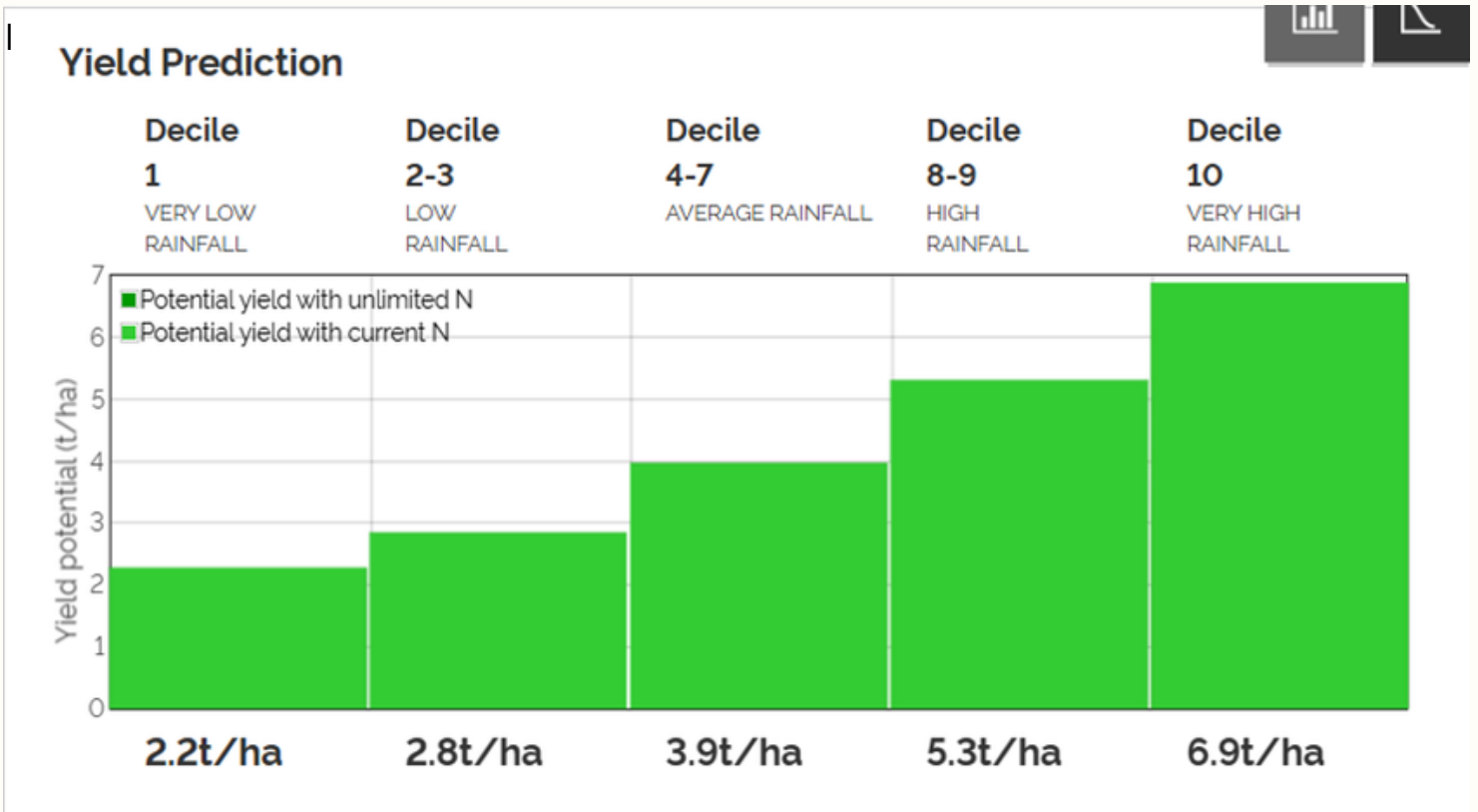
The paddock was lentils in 2025 and was sown to Tomahawk wheat on 22nd May at 75 kg/ha, with 110 kg/ha of N-Rich 28 (28:13) supplying 30 kg/ha of nitrogen and 14 kg/ha of phosphorus.

Soil sampling was conducted on 11th June when the crop was at the 1.5-leaf stage. Three sites were selected within the medium NDVI zone, and two cores were taken at each site to a depth of 90 cm. Each core was segmented into 0–10 cm, 10–30 cm, 30–60 cm, and 60–90 cm, and the corresponding depths from all cores were mixed to form composite samples.

Starting soil nitrogen was measured at 268 kg N/ha in the 0–90 cm profile, with an additional 30 kg N/ha supplied from seeding fertiliser. Salinity at 60–90 cm was present but is not considered yield-limiting for wheat. The high starting nitrogen is consistent with strong mineralisation following summer and autumn rainfall, combined with potential carry-over nitrogen from the poor 2024 season.

Soil testing should still be treated as a guide, as spatial variation, rooting-depth differences, and environmental factors mean some areas of the paddock will have more or less plant-available nitrogen than the zone average. The medium zone was chosen as the paddock representative because the paddock showed limited spatial variation compared with other soil types such as dune–swale systems, and because the project aims to support discussion around RiskWise and nitrogen-management strategies. Zoning paddocks into low, medium, and high production areas can provide a more detailed and accurate nitrogen approach.

The Yield Prophet model indicates that nitrogen will not limit yield across all rainfall deciles. In the model output, the light-green bars represent yield potential using the current nitrogen supply, while the dark-green bars represent yield potential assuming unlimited nitrogen. For this paddock, the light-green and dark-green bars sit exactly on top of each other across all deciles, showing that additional nitrogen would not increase yield potential at any rainfall scenario. This overlap confirms that plant-available nitrogen is already sufficient for the season, and therefore no further nitrogen is recommended.



For the full Yield Prophet® report for this site click the link:
www.unfs.com.au/other-resources/

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If you are interested in using Yield Prophet® on your own paddocks, **Yield Prophet® Lite** is a free online tool that estimates potential crop yield under different rainfall scenarios and nitrogen application rates. More information is available at:

<https://www.yieldprophet.com.au/yplite>

This Yield Prophet publication was delivered by UNFS and was funded by GRDC's RiskWi\$e project

