PivotScan

A HYDROCONNECT SERVICE FROM NELSON AUSTRALIA

Pivot Report
Report issued 20 Jul 2026 · v[1.x]

Pivot 28
Distribution fault, mid-to-outer span

Findings & recommendations, with full season-by-season evidence in the appendix.

PROPERTY	PIVOT	LOCATION	IRRIGATED AREA
McInnes Farm, Vic	SA4	-37.67, 140.91	37 ha
SPAN / LENGTH	**PERIOD ANALYSED**	**CROPS COVERED**	**IMAGERY**
5 towers / 200m	2020–2026 (12 seasons)	summer / winter	Sentinel-2 (10 m NDVI)

Draft template — illustrative figures only. Bracketed values are placeholders for the automated workflow.

SECTION 01

Findings & recommendations

STATUS
Inspect

Monitor | **Inspect**

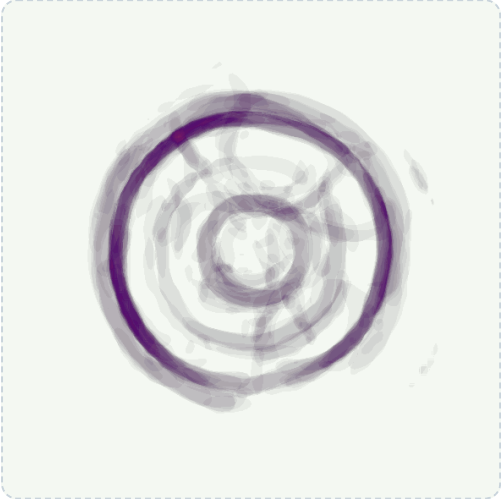
THE FINDING

A repeating under-application pattern affects about **48% of the field**. It appears in **6 of the last 12 seasons** — consistent with worn or blocked nozzles.

48%
of field affected

6 / 12
seasons with fault

WHERE IT IS ON THE PIVOT



RECOMMENDED ACTIONS

1. Inspect nozzles on the outer spans, first — check wear, blockage and pressure drop.
2. Compare nozzle chart vs. installed nozzles for those spans; verify end-gun and pressure regulator.
3. Re-scan next season to confirm the fault clears after any work (discounted re-scan).
4. Talk to your dealer about a Pivot RePack — a full nozzle-package refit restores outer-span uniformity in one pass. Nelson Australia can quote.

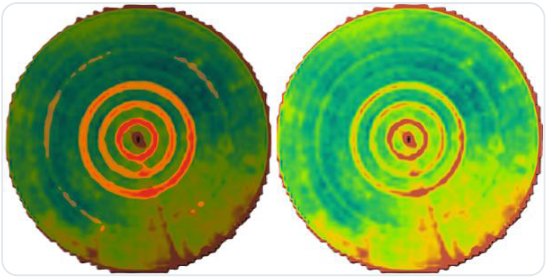
Confidence: Good. Based on 102 cloud-free images across 12 seasons. NDVI patterns can also reflect soil, terrain, wheel ruts or agronomy — nozzle attribution here is strong because the pattern is *radially fixed* and *recurring across crops and seasons*. Sentinel-2 (~10 m) means faults smaller than a few nozzles may not register.

SECTION 02

How to read this report

How are problems detected?

Every cloud-free satellite image within a season is analysed individually. Growth patterns consistent with a nozzle issue are highlighted based on how the crop is performing in the field on that single day.



Potential nozzle issues highlighted red (left), versus original NDVI image (right).

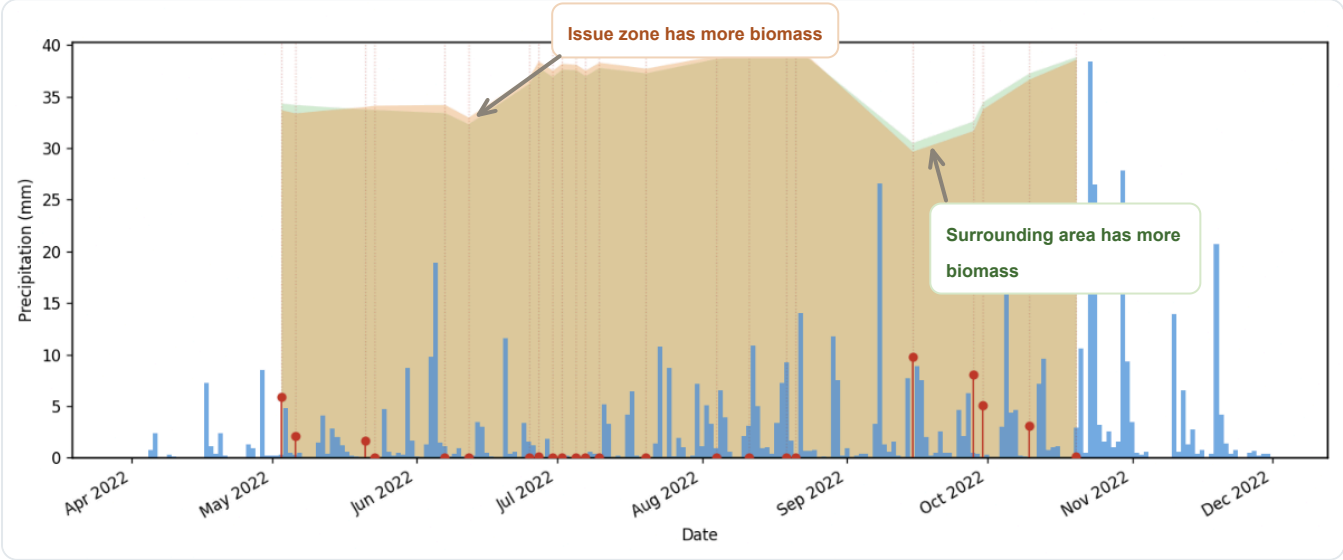
Combined heatmap across a season.

Seasonal presence — the heatmap

Each image is stacked across the season to reveal repeating patterns. Colour indicates how often a pattern is present: purple ≈ 25% of all images, through to bright white = present in every image (100%). The same legend is used on every seasonal-presence map in this report.

Rainfall & biomass — the season chart

Rainfall and biomass (NDVI) are collected across the season. This shows the pivot relative to the potential nozzle-issue locations, and how the pattern relates to rainfall, subsequent irrigation, or crop growth stage.



- Blue bars — precipitation (mm)
- Red vertical lines — cloud-free imagery dates; red circles — % of the field with an issue
- Green highlight — surrounding area has more biomass than the issue zone
- Orange highlight — issue zone has more biomass (can be normal before / after the problem dates)

What is NDVI? The Normalised Difference Vegetation Index compares how strongly plants reflect near-infrared vs. red light — a proxy for green biomass. Healthy, dense crop scores high; bare soil and stressed crop score low. PivotScan looks for representative patterns, pointing to the machine rather than soil or weather.

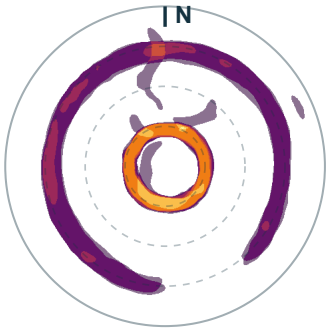
SECTION 03 · APPENDIX

Season-by-season evidence

One entry per analysed season. The heatmap shows seasonal presence of detected patterns (legend in Section 02); the chart shows rainfall, imagery dates and biomass split by issue zone vs. surrounding area. Radius rings are overlaid at 25 / 50 / 75% for orientation.

2020 — Summer

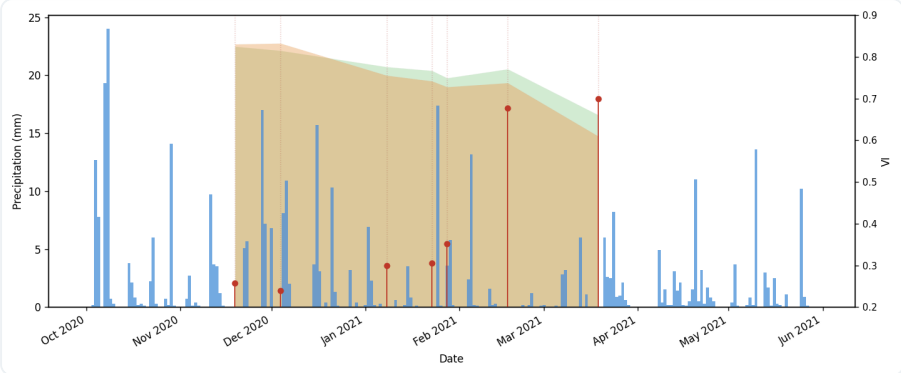
7 cloud-free images | 22% affected



SEASONAL PRESENCE

25% 100%

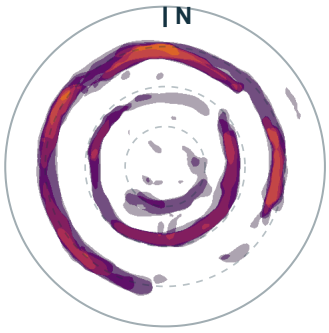
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2021 — Summer

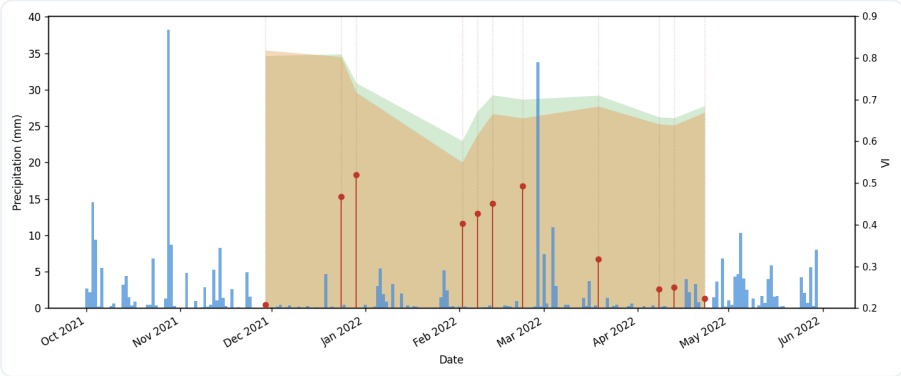
11 cloud-free images | 24% affected



SEASONAL PRESENCE

25% 100%

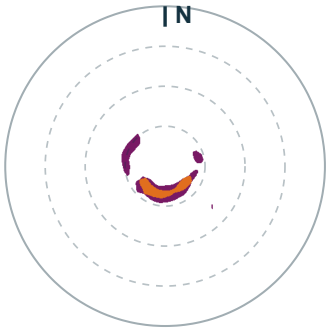
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

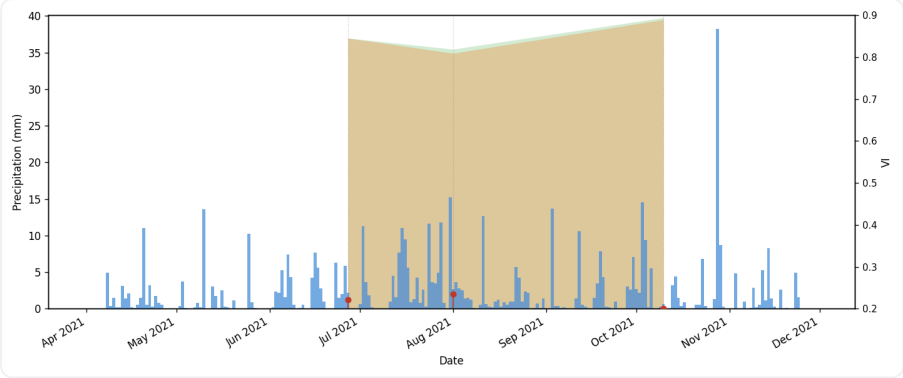
2021 — Winter

3 cloud-free images | 2% affected



SEASONAL PRESENCE

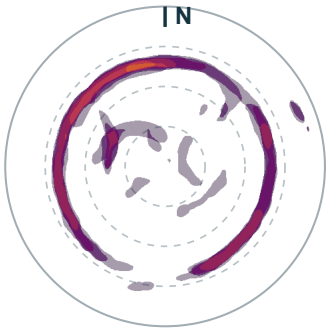
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

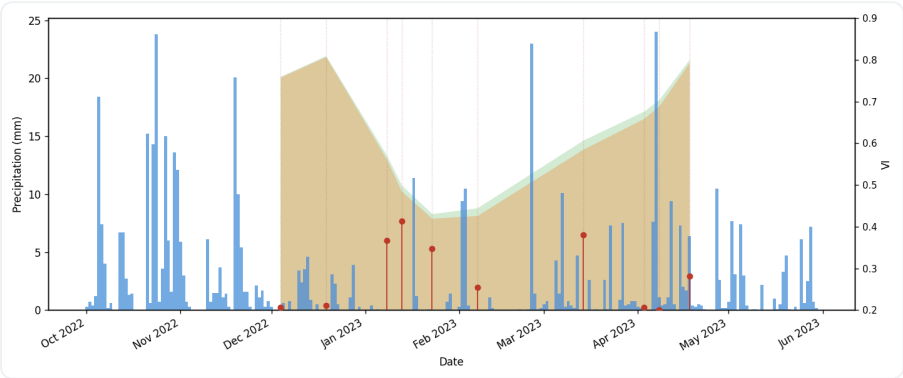
2022 — Summer

10 cloud-free images | 14% affected



SEASONAL PRESENCE

RAINFALL, IMAGERY DATES & BIOMASS



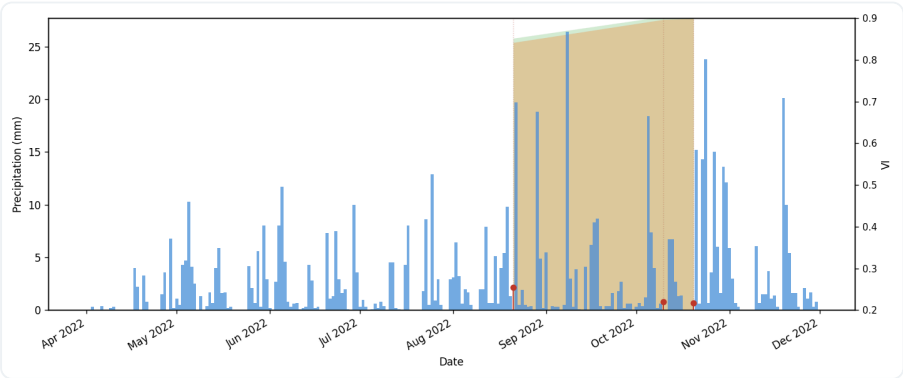
[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2022 — Winter

3 cloud-free images | 3% affected

SEASONAL PRESENCE

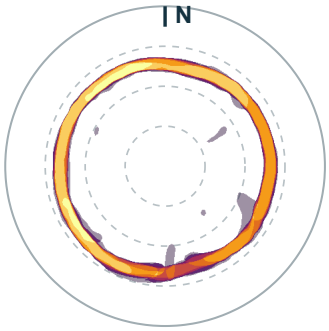
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2023 — Summer

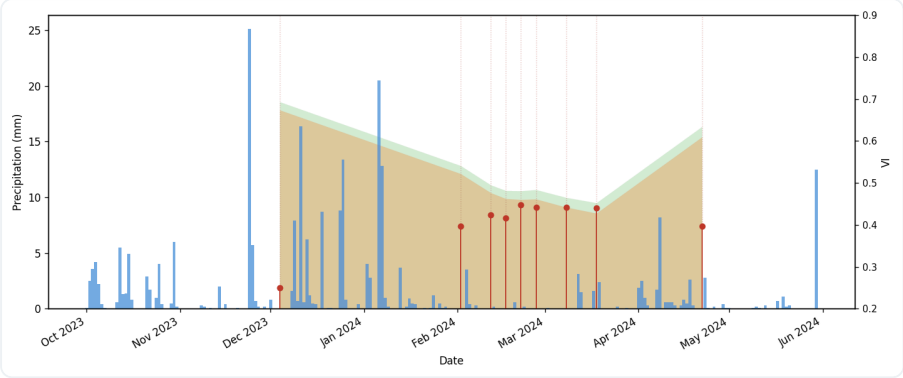
9 cloud-free images | 12% affected



SEASONAL PRESENCE

25% 100%

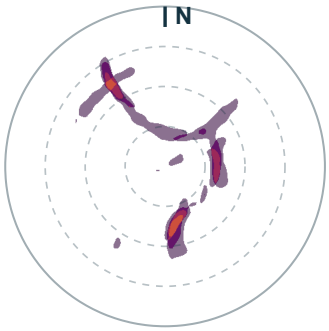
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2023 — Winter

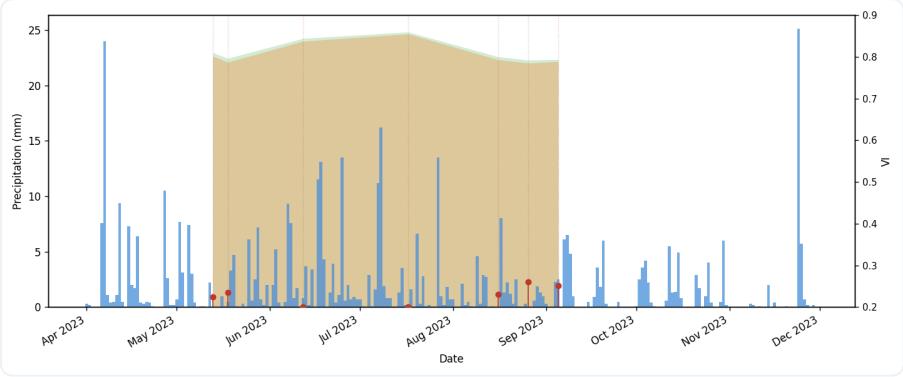
7 cloud-free images | 5% affected



SEASONAL PRESENCE

25% 100%

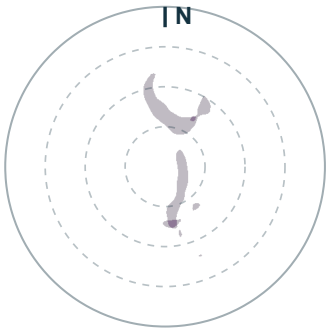
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2024 — Summer

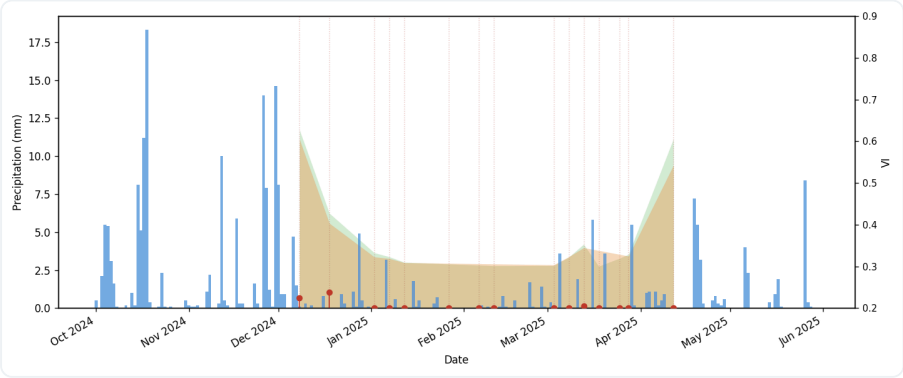
15 cloud-free images | 2% affected



SEASONAL PRESENCE

25% 100%

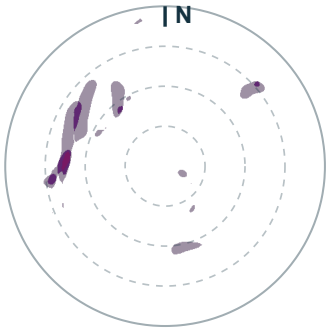
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2024 — Winter

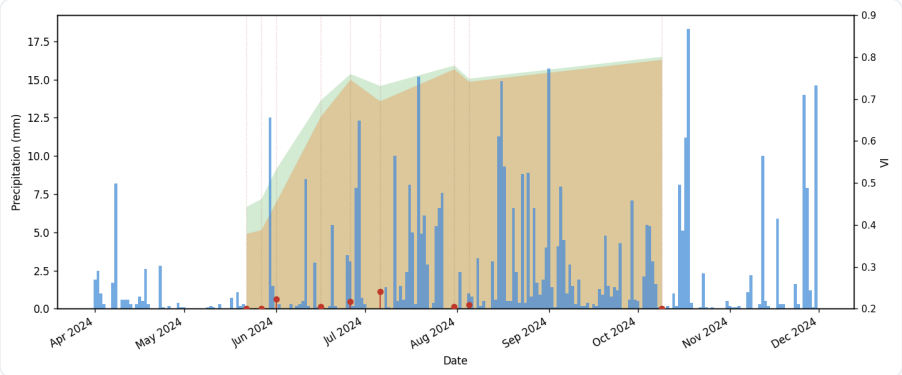
9 cloud-free images | 3% affected



SEASONAL PRESENCE

25% 100%

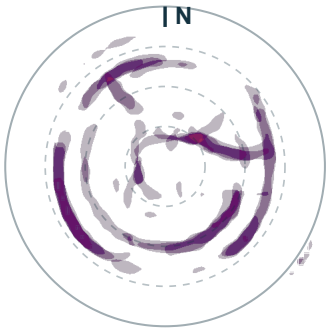
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2025 — Summer

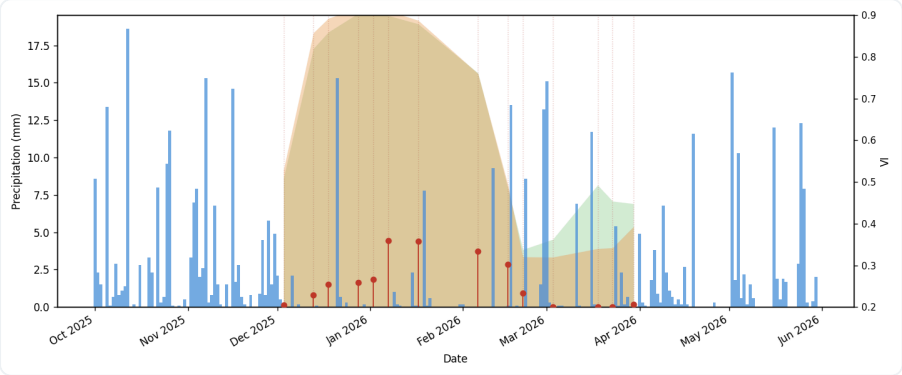
14 cloud-free images | 15% affected



SEASONAL PRESENCE

25% 100%

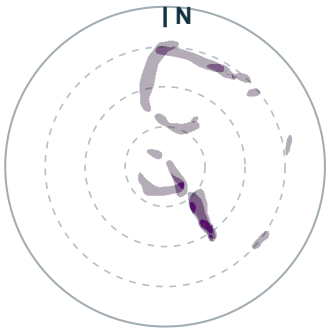
RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2025 — Winter

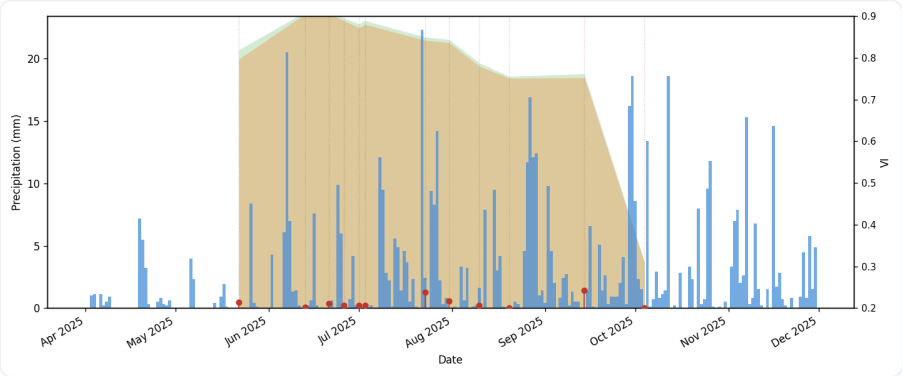
12 cloud-free images | 5% affected



SEASONAL PRESENCE

25% 100%

RAINFALL, IMAGERY DATES & BIOMASS

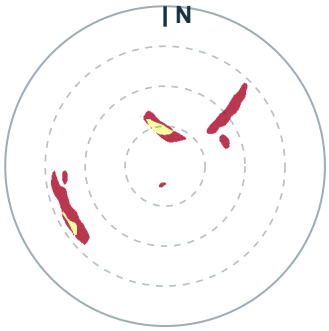


[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

2026 — Winter

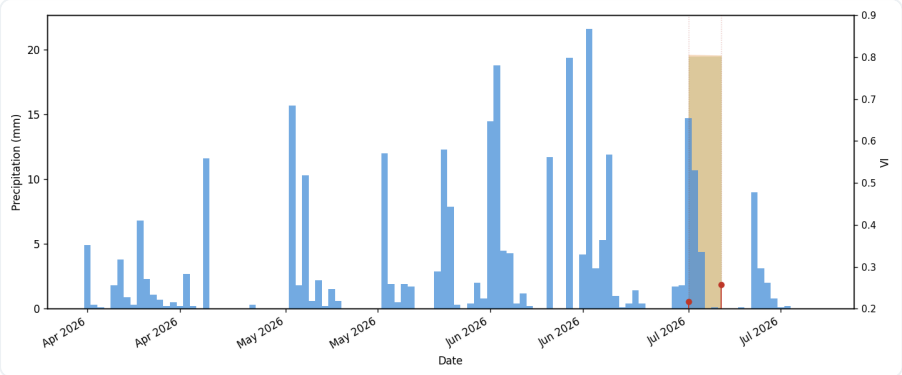
2 cloud-free images

2% affected



SEASONAL PRESENCE

RAINFALL, IMAGERY DATES & BIOMASS



[Season note — e.g. pattern present mid-season at 60–75% of radius; cleared after rainfall event.]

SECTION 04

Limitations & data confidence

- Imagery is Sentinel-2 optical at ~10 m pixels. Faults smaller than a few nozzles may not register.
- Analysis is based on 102 cloud-free images across 12 seasons. Cloudy periods reduce coverage — seasons with few usable images carry less weight: 2026 Winter.
- NDVI patterns can also reflect soil type, terrain, wheel ruts, drainage or agronomy. Nozzle attribution is strongest when a pattern is radially fixed and recurs across crops and seasons.
- [Property-specific caveats — e.g. known soil variation, recent works, crop changes.]

SECTION 05

Next steps & contact

Confirm the fix — discounted re-scan

After any nozzle work, re-scan the following season to confirm the pattern clears. Re-scans of a previously analysed pivot are offered at a discounted rate. [Re-scan offer / pricing detail.]

Pivot RePack — quote via your dealer

A full nozzle-package refit restores uniformity across the machine in one pass. Talk to your dealer, or contact Nelson Australia for a quote. [Dealer / contact detail.]

PivotScan · A HydroConnect Service from Nelson Australia

Powered by Data Farming satellite analytics