

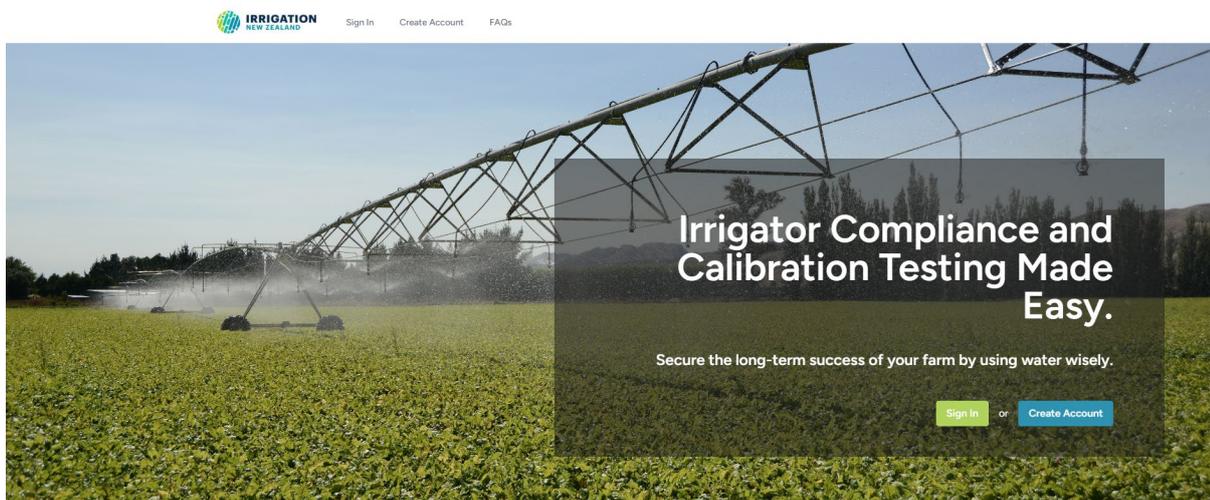


Using catchcan.co.nz

Catch Can testing – requirements and process for undertaking a test

Catchcan.co.nz is designed to help support good management practice and help growers/operators identify issues within irrigation systems.

Catchcan.co.nz reports use field data to provide a summary of applied depth measured and a calculation of the system's uniformity (evenness) of application.



What is involved?

Catchcan.co.nz follows IrrigationNZ's guidelines and supports good management practice. It offers two test types - a basic pivot calibration and a detailed performance audit – helping users assess key performance indicators (KPIs) and improve irrigation efficiency in New Zealand.

Users input field measurements into the tool to generate reports on applied depth (mm), distribution uniformity (DU_q), and other metrics. While not a full system performance assessment, these tests help growers identify areas for improvement.

For both the calibration and performance audit tests, the user places a set number of identical catch cans (buckets) in the field. The irrigation system then operates over them, and the user measures the water collected in each bucket.

Along with recording key performance indicators and system settings, this data is entered into Catchcan.co.nz, which generates an easy-to-read report. The report helps users assess whether their system aligns with IrrigationNZ performance guidelines.

What will the testing tell you?

Applied Depth – The depth of water applied by the irrigator. The tool compares the measured applied depth to the target application as a calibration check.

Identifying discrepancies in applied depth helps users fine-tune system settings, ensure correct water application, and detect wear and tear that may affect system performance. It can also highlight a risk factor for site issues such as ruts, ponding, or infrastructure impacts.

Distribution Uniformity (DU_{lq}) – Also known as Lower Quartile Distribution Uniformity, this metric describes how evenly water is distributed to plants. A higher DU_{lq} indicates more uniform water application across the irrigated area. Greater uniformity improves confidence that measurements accurately reflect the system's performance.

Application Intensity – The rate (mm/hour) at which water is applied, similar to rainfall intensity. If it exceeds soil infiltration capacity, it can cause ponding, runoff, and inefficiencies.

For centre pivots, intensity increases along the machine's length - low at the inner spans and highest at the end. This tool calculates intensity at the end tower, representing the highest rate and a significant portion of the irrigated area.

Note: Application intensity is not a pass/fail metric but helps you understand your system. It can guide discussions with irrigation partners on potential hardware upgrades, technology improvements, or operational changes to enhance irrigation performance.

What are the limits of a catch can test?

Catchcan.co.nz and other tools are NOT full system assessments. For a full system performance assessment, please discuss with your irrigation provider or look up the [Irrigation New Zealand Register of Qualified Individuals](#) to find a qualified performance assessor in your region.

A Catch Can test provides an overview of whether your irrigator is performing to design parameters with respect to the overall amount of water applied (applied depth) and how uniformly this is applied, in comparison to limits set out in the [New Zealand Piped Irrigation System Performance Assessment Code of Practice](#).

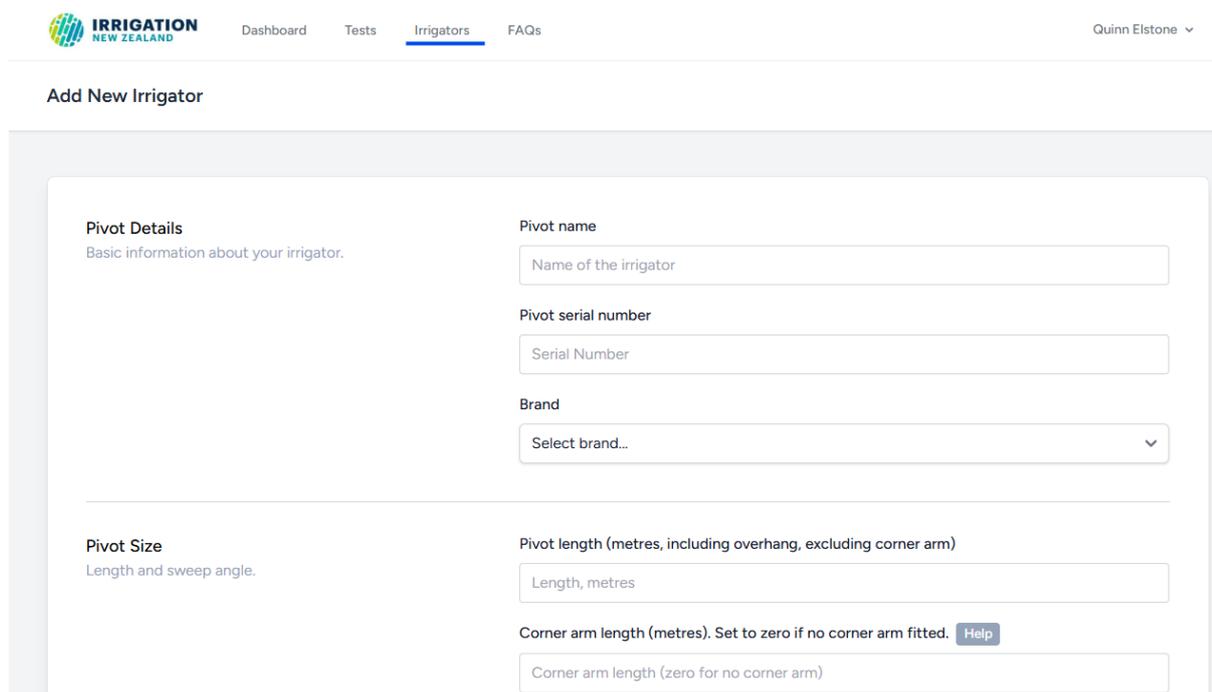
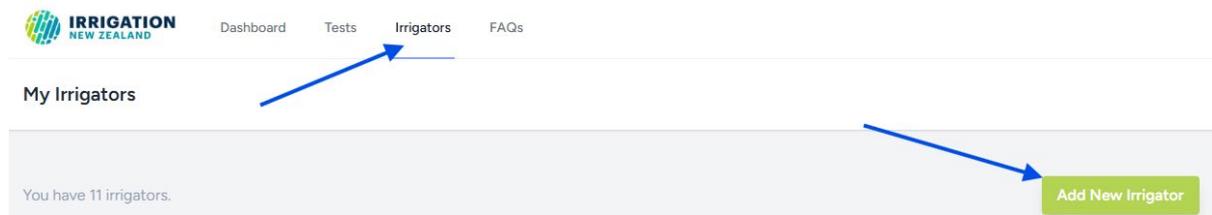
It is a snapshot of how you are running the irrigator and the system at that point in time.

Setting Up and Using Catchcan.co.nz for Irrigator Testing

Preparing for a Catch Can Test

1. Set up the irrigator in [Catchcan.co.nz](https://catchcan.co.nz)

- Log into Catchcan.co.nz and navigate to the Irrigator Setup section.
- Add a new irrigator. Once set up, irrigators are saved in the system so you can revisit old tests and create new ones without re-entering all details.
- Use the KPI form (at the back of this document) to gather and record the required information. This should allow you to set up each irrigator in a few minutes.



The screenshot shows the 'Add New Irrigator' form on the Catchcan.co.nz website. The navigation menu at the top includes 'Dashboard', 'Tests', 'Irrigators', and 'FAQs'. The page title is 'Add New Irrigator'. The form is divided into two sections: 'Pivot Details' and 'Pivot Size'. The 'Pivot Details' section includes fields for 'Pivot name' (Name of the irrigator), 'Pivot serial number' (Serial Number), and 'Brand' (Select brand...). The 'Pivot Size' section includes fields for 'Pivot length (metres, including overhang, excluding corner arm)' (Length, metres) and 'Corner arm length (metres). Set to zero if no corner arm fitted.' (Corner arm length (zero for no corner arm)). There is a 'Help' button next to the 'Corner arm length' field.

2. Print Field Test Records sheets

- Catchcan.co.nz offers two tests - once the irrigator is set up, navigate to it and find *Print test sheets*.
- Choose the test you plan to undertake and print the corresponding sheet to take into the field to conduct your field tests. Sheets are specific to each irrigator.

Print test sheet

Catch Can supports two different test types. Click on the test name to download the corresponding test sheet.

[Uniformity and Application Rate Performance Audit Test \(Detailed\)](#)

[Uniformity and Application Rate Calibration Test \(Basic\)](#)

3. Plan and complete your test

- Check weather conditions and prepare equipment.
- Place buckets correctly to match the selected test type.
- Undertake the test, follow the Field Test Records sheet provided by Catchcan.co.nz.

Data Entry in Catchcan.co.nz

4. Enter results

- From your dashboard, click the irrigator name (or access via *Irrigators*)
- Select *Save test results*. Use the drop-down to choose the correct test type:
 - *Calibration* = single row of buckets
 - *Audit* = two rows of buckets
- Click *Enter Results* to proceed

Save test results

After you've completed your test sheet enter your results to generate your test report.

Uniformity and Application Rate Performance Audit Test (Detailed)

Enter Results

- Enter your test results, weather information and the additional test information requested – the inputs will follow your Field Test Records sheet. *Help* notes are available for guidance.
- Enter bucket readings accurately- you must enter a VOLUME in milli-litres (mL). For the Calibration test it's the single row of volumes, for the Audit test it's the double row.
- **Double-check all entries before saving – results cannot be edited afterwards.**

Viewing & Interpreting Test Results

5. Access reports

- Depending on your browser, results may automatically download as a PDF, or you may need to click within the tool to download.
- Once saved, results appear at the top of the screen. Scroll to the beginning of the test to see a summary.

IRRIGATION NEW ZEALAND Dashboard Tests Irrigators FAQs

test Uniformity and Application Rate Calibration Test (Basic) Test #36

[View Catch Can Test Report](#) · [Back to Pivot](#)

Irrigation Test Results

Section	Distribution Uniformity	Average Applied Depth	Application Intensity
Inner Span	✓ 1.00 Very good	✗ 14% (4.80mm) Poor	17.98mm/hr at 2/3 of pivot
Outer Span	✓ 0.93 Very good	✗ 15% (5.14mm) Poor	31.61mm/hr at LRDU
Average of Inner + Outer span	✓ 0.97 Very good	✗ 15% (4.97mm) Poor	N/A

Pivot Details
Basic information about your irrigator at the time of the test.

Panel depth setting (mm) [Help](#)
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Pivot speed setting (%) (Optional) [Help](#)

- Click on “View catch can report” at the top of the page to create a full PDF report of your Catch Can results

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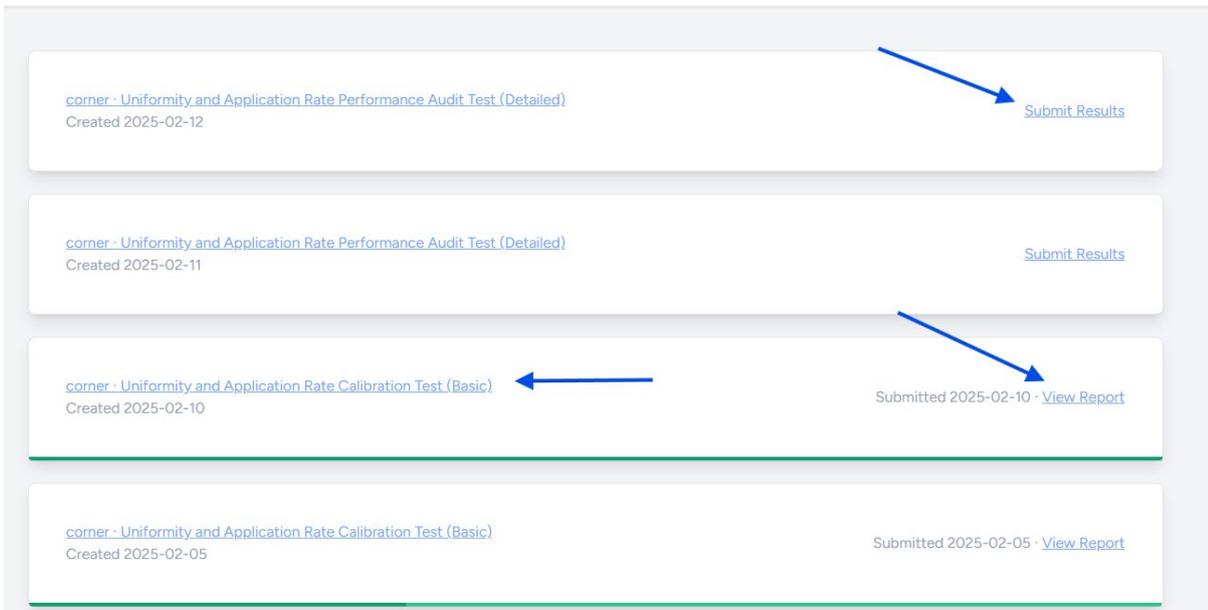
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- Reports are saved against each irrigator and are also visible under the *Tests* section.
- In *Tests*, completed reports show “View report” and the date. If it says “Submit results”, the test has not been finalised.
- You can also click a test name to view details online without downloading.

My Tests



The screenshot shows a list of four tests under the heading 'My Tests'. Each test entry includes a title, a creation date, and a link to either 'Submit Results' or 'View Report'. Blue arrows point to these links in the original image.

Test Title	Created / Submitted	Action
corner - Uniformity and Application Rate Performance Audit Test (Detailed)	Created 2025-02-12	Submit Results
corner - Uniformity and Application Rate Performance Audit Test (Detailed)	Created 2025-02-11	Submit Results
corner - Uniformity and Application Rate Calibration Test (Basic)	Created 2025-02-10	Submitted 2025-02-10 · View Report
corner - Uniformity and Application Rate Calibration Test (Basic)	Created 2025-02-05	Submitted 2025-02-05 · View Report

6. Understanding your results

- *Distribution Uniformity (DU)*: Evaluates how evenly water is applied (>0.80 is good).
- *Christiansen Uniformity (CU)*: Measures overall variation (>0.85 is good).
- *Measured Application Depth*: Should be within 10% of the target depth.
- *Application Intensity*: High intensity may indicate runoff or leaching risks.

Next Steps Based on Results

- If results are within acceptable ranges, schedule the next routine test.
- If results show inconsistencies, review pressure settings, sprinkler pack condition, and consult your irrigation specialist as necessary.

Catchcan.co.nz provides accurate setup, easy data entry, and reliable uniformity assessments for optimizing irrigation performance.