

2025

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A Sugarcane Growers Sustainable Vision

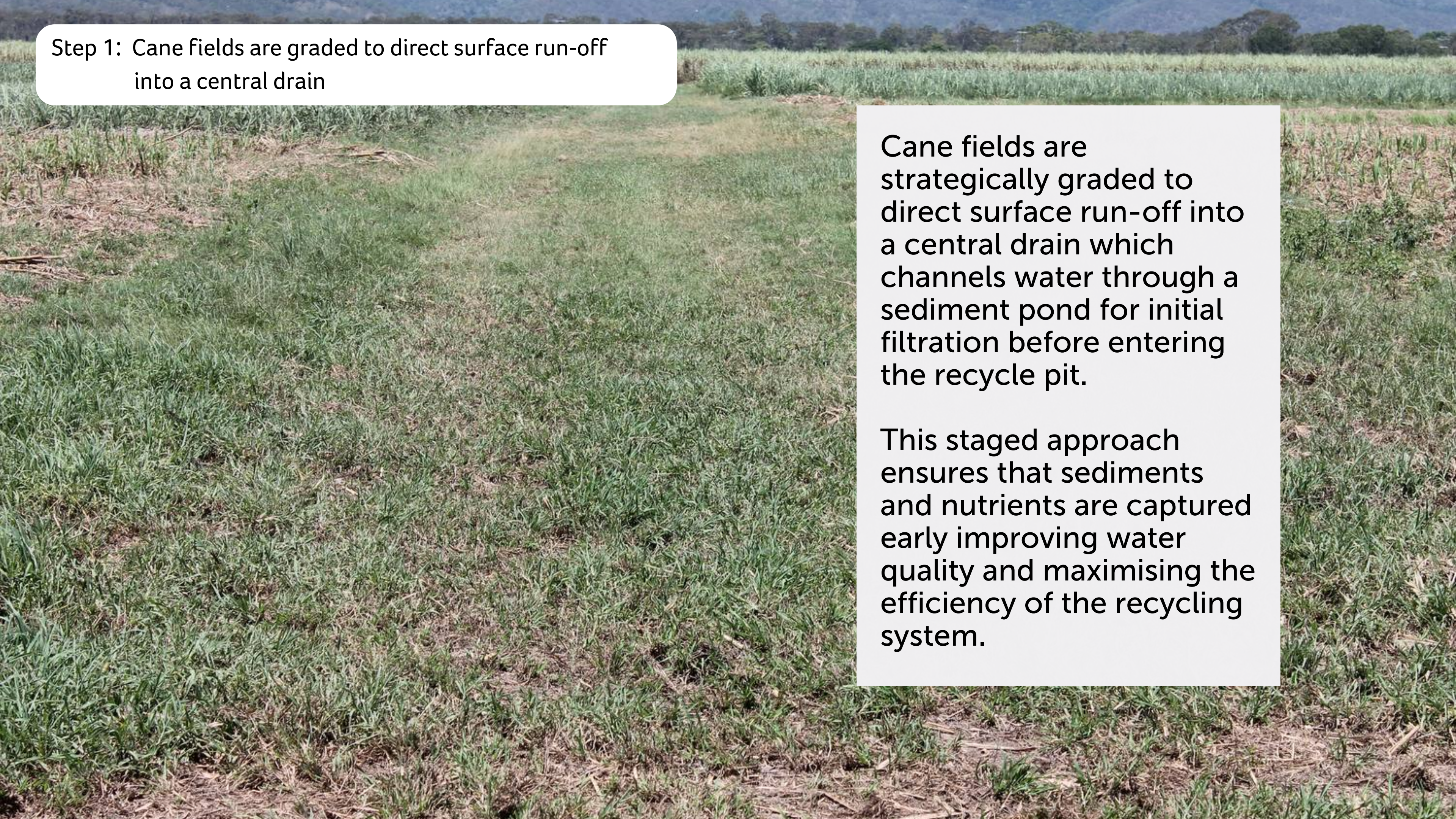
Tradition to
Transformation



Tradition to Transformation

This grower's story is deeply rooted in the land. Having grown up on the family farm, he understands its rhythms, challenges and potential. Following the passing of his father and with funds now available he is channeling this legacy into an innovative and sustainable future—one that protects productivity while safeguarding the environment.

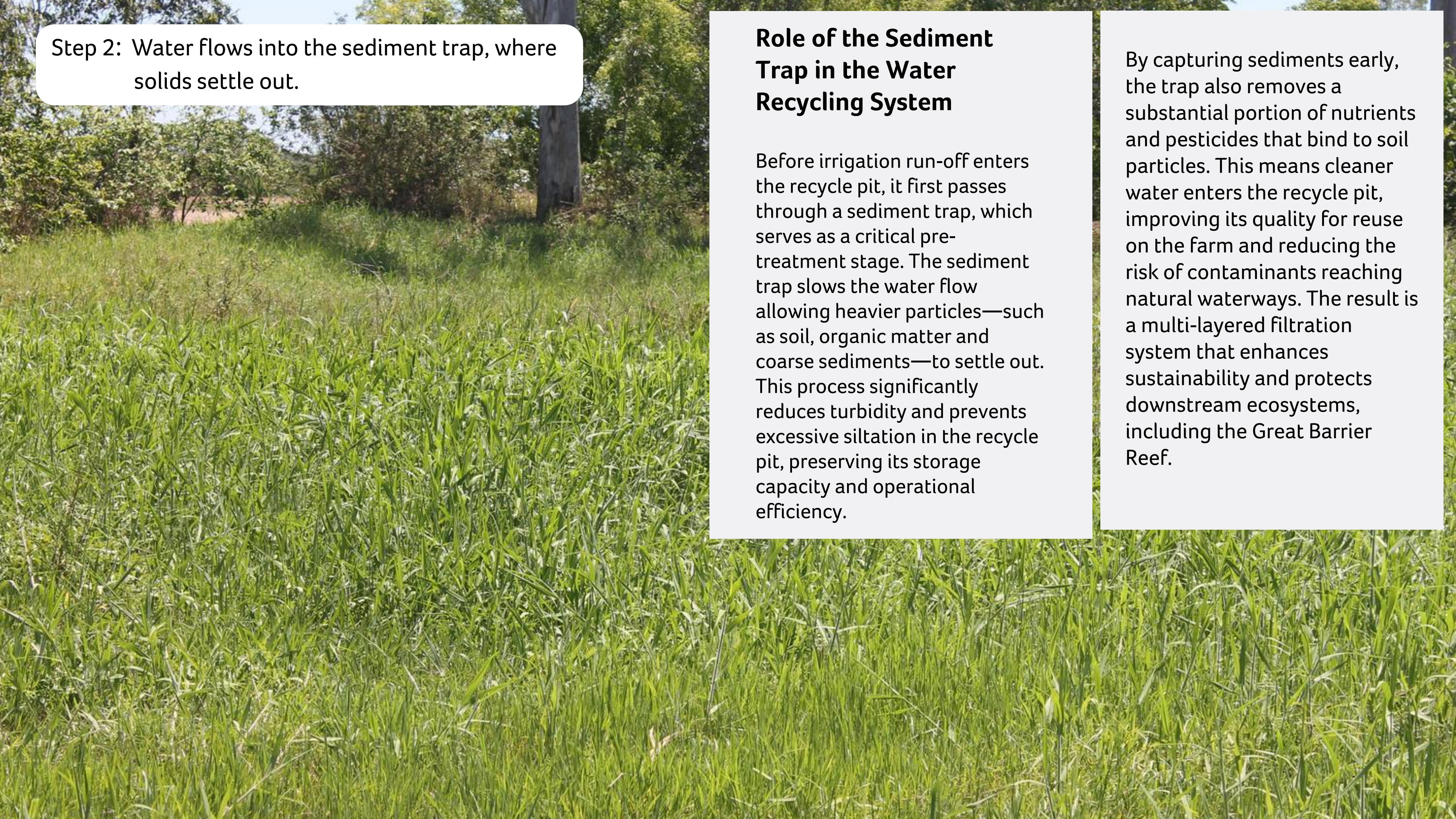
A key initiative is the construction of a recycle pit—also known as a tailwater storage pit, sediment pond, or retention pond. This system is designed to capture irrigation run-off water for reuse on the farm, creating a closed-loop approach that conserves resources and prevents pollutants from entering waterways.



Step 1: Cane fields are graded to direct surface run-off into a central drain

Cane fields are strategically graded to direct surface run-off into a central drain which channels water through a sediment pond for initial filtration before entering the recycle pit.

This staged approach ensures that sediments and nutrients are captured early improving water quality and maximising the efficiency of the recycling system.

A photograph of a lush green field with tall grass. In the background, there are trees and a clear sky. The image is used as a background for the text boxes.

Step 2: Water flows into the sediment trap, where solids settle out.

Role of the Sediment Trap in the Water Recycling System

Before irrigation run-off enters the recycle pit, it first passes through a sediment trap, which serves as a critical pre-treatment stage. The sediment trap slows the water flow allowing heavier particles—such as soil, organic matter and coarse sediments—to settle out. This process significantly reduces turbidity and prevents excessive siltation in the recycle pit, preserving its storage capacity and operational efficiency.

By capturing sediments early, the trap also removes a substantial portion of nutrients and pesticides that bind to soil particles. This means cleaner water enters the recycle pit, improving its quality for reuse on the farm and reducing the risk of contaminants reaching natural waterways. The result is a multi-layered filtration system that enhances sustainability and protects downstream ecosystems, including the Great Barrier Reef.

Step 3: Cleaner water overflows into the recycle pit for storage and reuse.

The pipe is strategically positioned to enable efficient transfer of water from the recycle pit to the Proposed Turkey Nest Dam, ensuring optimal reticulation across the farm. Additionally, the pipe can be capped when required, allowing the water level in the recycle pit to be elevated for improved storage capacity and operational flexibility.

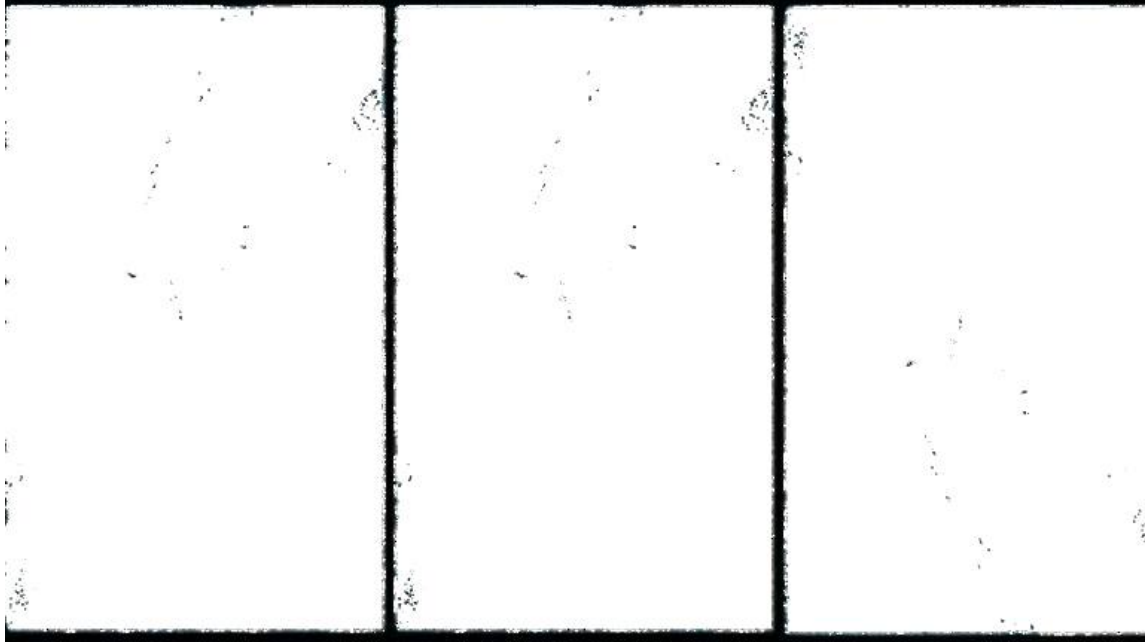
Recycle Pit

A key initiative is the construction of a recycle pit. This system is designed to capture irrigation run-off water for reuse on the farm, creating a closed-loop approach that conserves resources and prevents pollutants from entering waterways. By intercepting run-off containing sediments, nutrients, and pesticides, the recycle pit ensures these elements are re-utilised rather than contributing to downstream environmental degradation. To further enhance ecological benefits, the pit area will be grassed as soon as conditions allow, stabilizing soil and promoting biodiversity.

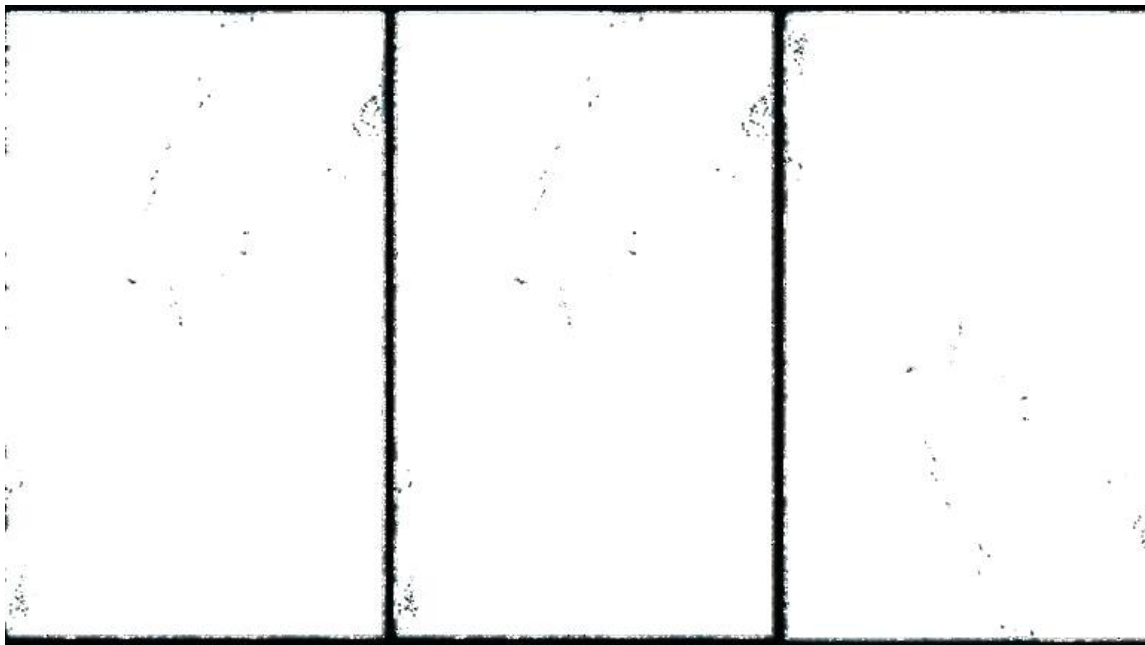
Step 4: From the recycle pit, water is pumped or piped to a Turkey Nest Dam for redistribution across the farm.

Proposed Turkey Nest Dam Site

A Turkey Nest Dam is proposed at the highest point on the property. This strategic placement will enable efficient reticulation or piping of water from the recycle pit, optimising water distribution and reducing reliance on external sources. Together, these projects represent a smart integration of traditional farming knowledge with modern sustainability practices.



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Thank you

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