

CASE STUDY MARK HATCH



Who

Mark and Juanita Hatch

Location

Clare, 40km west of Ayr

Catchment

Barratta Creek

Rainfall

882mm

Property size

123ha

Landuse

Sugarcane production

Family history

At 16 years old Mark left school and started working on the family grazing property and earthworks business at Springsure, Queensland. The Hatch family then moved to Clermont where they purchased another grazing property and developed their earthworks business.

Mark and brother Paul branched out into their own earthworks company and made the move to the Burdekin in 1995 to work and clear the new irrigation areas that were released.

In 1997, Mark also started working on the newly acquired family farm in Clare and bought out the family farm in 2007 when his parents retired.

He and Paul still have their earthworks business and have expanded this to accommodate their machinery needs on their own farms.

Practices

Mark plants in dual rows in a 2m centre spaced system. Bare fallow on formed beds is used, sprayed with knockdown herbicides before planting.

Mark is looking at returning to a legume rotational crop, using zonal tillage, but is cautious due to bad experiences in the past.

Around 75 per cent of the farm is now EM mapped, with the aim of completing across the entire farm.

The farm is flood irrigated using a furrow system with a mix of bore and open water. All water runoff is captured and re-used to water approximately 30 per cent of the farm.

Chemical practices

Mark has a whole-farm approach weed management plan which is sectioned due to weed pressures. Types and rates of herbicides used vary according to weed types and soil zones, with bell vine and para grass specifically targeted.

Predominantly knockdown is used across the farm and residual herbicides are used strategically in plant cane for early control and in ratoon for vine. Mark calculates rates via label recommendation and seeks agronomist advice when using new products.

A high clearance spray tractor equipped with flow rate monitoring and GPS guidance does all herbicide applications for Mark and Paul's farms.

Mark has shielded sprayers, but the high clearance tractor isn't setup for dual herbicide application yet.

Taking into account irrigation and cultivation practices, Mark times the herbicide application to minimise the number of applications needed.

The monitoring equipment in the tractor allows Mark to continually check the calibration of the equipment and he performs a full recalibration if there are any anomalies.



Game Changer
Burdekin Trial Site
 ENHANCED NITROGEN EFFICIENCY
 Variety: **Q185** Class: **Q1**
 Sponsors:
 T1 - UREA@220N T2 - CR25%@180N
 T3 - ENTEC@180N T4 - UREA@180N
 T5 - CR50%@180N
 Co-ordinator:
 MARK HATCH
 Contact:
 JAYSON - FARMACIST ROAD 231 684
 ANTHONY - HQ DRY TROPICS 0498 272 613
 Website: PivotIQ.com.au
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Nutrient Practices

The farm's nutrient plan is block specific and takes into account soil zones and crop class.

Traditionally the farms nutrients are applied in two passes; urea applied straight behind the harvester and then dunder applied after the first watering. Rates are worked out by regular soil testing on individual blocks under the guidance of local agronomists.

Due to economic constraints and a need to reduce workload, Mark made the shift from granular to a liquid fertiliser applied by a contractor in a single pass. The benefits are that all nutrients are applied and recorded accurately, and manpower to perform the task is outsourced saving time.

Mark believes the shift in management practice and reduction in nutrient application will also have an economic gain and allow more time for the earthworks business.

Motivators for change

All of Mark's agricultural knowledge has been learnt from hands-on experience and following advice from local industry representatives.

Mark is always seeking to learn and recognises the potential of enhanced efficiency fertilisers.

Challenge

There is significant cost to using nitrification inhibitors (ENTEC) and controlled release formulations (AGROCOTE) and uncertainty around their reliability. Further assessment is needed to determine cost versus benefit. Other major challenges to the trials include soil type, matching nutrient requirement and reducing losses from the farm.

Project involvement

Mark is hosting one of 12 replicated GameChanger Enhanced Efficiency Fertiliser Trials which are looking at breaking down the barriers to the adoption of enhanced efficiency fertiliser in the Burdekin, through environmental, economic and social monitoring.

Treatments

- T1- Urea @220N
- T2- Urea@180N
- T3- Entec @180N
- T4- CR25% @180N
- T5- CR50% @ 180N

Monitoring

The Enhanced Efficiency Fertiliser Trials were designed by Farmacist

to identify production differences between N formulations and ratios based on different soil types, application rates and application timings throughout the year.

Results

Using these more efficient formulations to target delivery of N has the potential to not only increase production but also reduce N losses, resulting in improved water quality.

Results from the 2015 harvest season indicate no significant difference in productivity between any of the treatments. Treatments T2, T3, T4 and T5 had better nitrogen use efficiencies that T1 (control).

No productivity was lost through reducing rates from 220N to 180N.

All treatments have been reapplied and will be further investigated in the 2016 harvest season.

Showcasing to broader community

Mark has significant experience in developing land for agriculture from virgin bushland. This, combined with his experience as a primary producer, makes him a valuable member of the NQ Dry Tropics Sugarcane Innovations Programme.



FAMILY...

Business partners, Mark and brother Paul Hatch.

Who are we?

NQ Dry Tropics is an independent, not-for-profit, non-governmental organisation that supports the Burdekin Dry Tropics community to sustainably manage its land and water. As the leading Natural Resource Management body for the 146,000km² Burdekin Dry Tropics region, NQ Dry Tropics views innovation as crucial to the future of the agriculture sector.



The Programme

NQ Dry Tropics Sustainable Agriculture programme offers information, training and support to assist agricultural producers to use best management practices for resilient landscapes and productive enterprises. Within this programme, the Sugarcane Innovations Programme delivers a number of projects that support innovative farmers with opportunities to trial their practice ideas with the assistance of technical experts. Delivery partners are Farmacist, the Queensland Department of Agriculture and Fisheries and the Burdekin-Bowen Integrated Floodplain Management Advisory Committee.

The Projects

The fast-tracking adoption of game-changing sugarcane nutrient and pesticide management practices (GameChanger) project is funded by the Australian Government Reef Programme. GameChanger management practices focus on using precision agriculture technologies and advanced planning to provide opportunities for cane farming to be more economically and environmentally sustainable.

Project Catalyst is a pioneering partnership funded by the Coca-Cola Foundation through the World Wildlife Fund, which reduces the environmental impact that sugar cane production has on the Great Barrier Reef. The project is grower-led and involves a group of innovative farmers that are developing and testing management practices that improve the quality of the water leaving sugarcane crops. Growers receive support for projects through Reef Programme Water Quality Grants.

The Australian Government Reef Programme is reducing the impacts of agriculture on the Great Barrier Reef through implementing a water quality improvement programme to achieve sustainable agricultural practices in the Burdekin Dry Tropics NRM region. The targeted extension and financial incentives programme aims to improve water quality by focusing on reducing sediment, pesticide and nutrient loss from Burdekin properties.

For more information

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Australian Government



Queensland Government