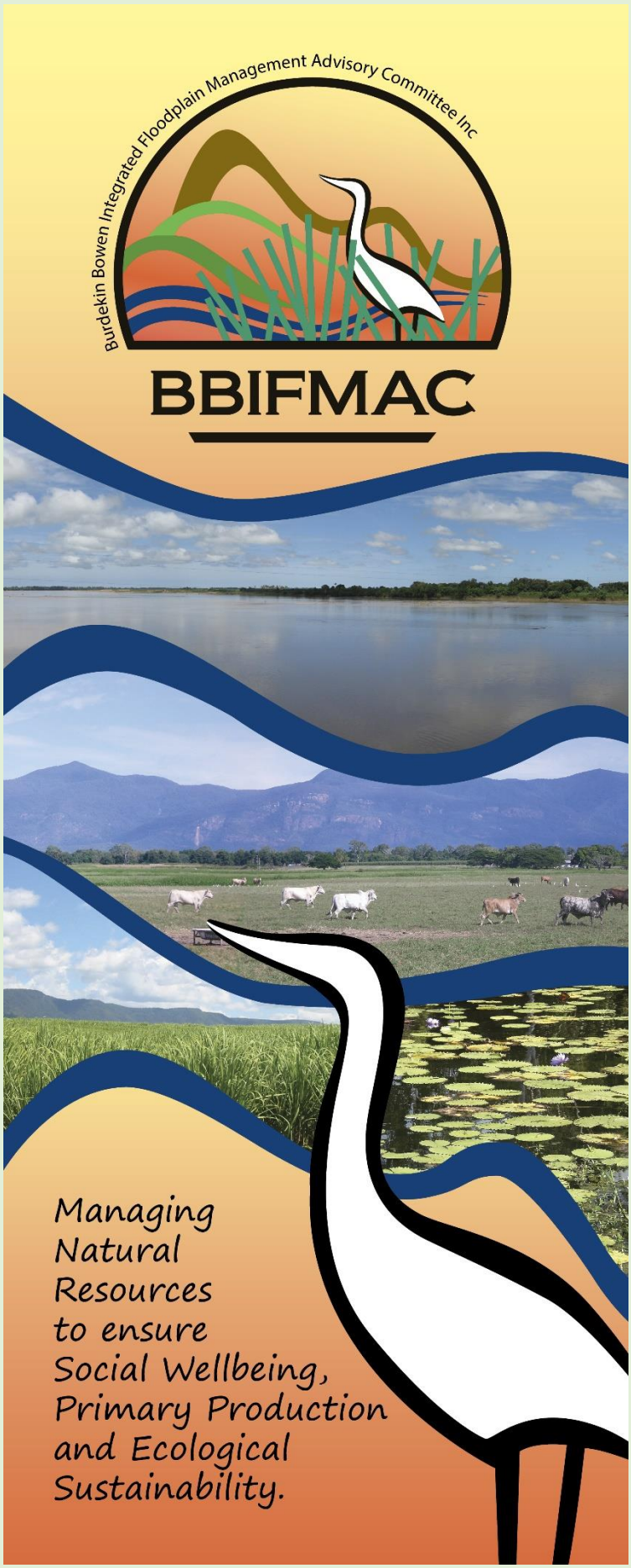
NEWSLETTER

Issue 12 April 2021



Recent Events

The Burdekin Sugarcane Regional Integrated Science Forum was hosted by NQ Dry Tropics on 31st March. Despite the event being moved online due to the Covid-19 restrictions in Queensland, various stakeholders were brought together to showcase the progress on many current projects.

The Department of Environment and Science (DES) Paddock to Reef program was a point of focus, with discussions on the new P2R report card results, available for viewing at www.reefplan.qld.gov.au/tracking-progress/reef-report-card/2019.

BBIFMAC Manager, Arwen Rickert, and BRIA Irrigators Manager, Russ McNee presented at the forum on the findings of the two-year Barratta Creek Water Quality Monitoring project. The presentation was well received by attendees. The event also included presentations on the Sugar Research Australia (SRA) Cane to Creek 2.0 project, as well as the DES Catchment Loads Monitoring Program. BBIFMAC is involved in the water quality monitoring for both.

The event provided a good opportunity for a deeper understanding of various projects in the Burdekin, as well as evaluation of results and constructive feedback.

Meet the BBIFMAC Committee

Now that we have introduced the BBIFMAC staff, we would like to take this opportunity to introduce one of the BBIFMAC Committee members with each newsletter. In this issue we introduce Frank Mugica.

Frank Mugica is the newest member of the BBIFMAC Management Committee, having joined at the AGM last year. Frank was born and bred in the Burdekin, originally from Dalbeg until he moved to Ayr in 2011. Frank has been farming in Ayr since 2013, with past experience in grazing, cane, legumes and hay across the region, including Dalbeg and Clare. Frank is also on the board at St Francis Primary School, as well as various other community and industry boards. Frank has participated in several projects with BBIFMAC, including the current CQU Spice Trial. He has also been involved with Farmacist and BPS projects over the years.

An Evidence Based Approach to Improving Water Quality in the Barratta Creek Catchment

Project Complete ✓

The Barratta Creek Project has come to a close after 2-years of hard work by the project team. BRIA Irrigators Ltd managed the project, with funding provided by the Great Barrier Reef Foundation. The two-year project was an evidence based, farmer driven project with the main aim of reducing nutrient and agricultural chemical losses from farms in the Barratta Creek catchment. A range of farming practices were trialled, and the relative water quality and productivity merits were quantified for each.

A total of nine trial sites were monitored over the course of the two-year project. Burdekin Productivity Services (BPS) provided the agronomic guidance on five of the sites and Farmacist provided the agronomic guidance on the other four. BBIFMAC were engaged as an independent organisation to undertake the water quality monitoring and associated analysis and reporting on all of the trial sites. These sites were sourced through a collaborative effort between organisations in the Barratta Creek Action Group.

The project has officially come to a close after BBIFMAC completed the water quality monitoring in February this year. Over 1200 water samples have been collected to date. Final reports for the first-year results have been provided to the participating growers, with the second year reports to come as the sites are harvested towards the end of the year.

The project team delivered a presentation of the preliminary year 2 results to the participating growers and relevant stakeholders at Clare on the 24th March, with 38 people in attendance. The key findings from each site were highlighted, with the second-year results confirming the preliminary trend of the first year in almost all cases. The information was well received, with great questions and discussions from the audience.

The project team delivered a presentation of the preliminary year 2 results to the participating growers and relevant stakeholders on 24th March, at the Clare Club.

Arwen Rickert (BBIFMAC) and Russell McNee (BRIA Irrigators) also presented at the Burdekin Integrated Science Forum online event, hosted by NQ Dry Tropics on 31st March to re-iterate the key project findings, including the importance of improved irrigation practices and tailwater capture being recognised in the Paddock to Reef (P2R) reporting and modelling.

KEY LEARNINGS:

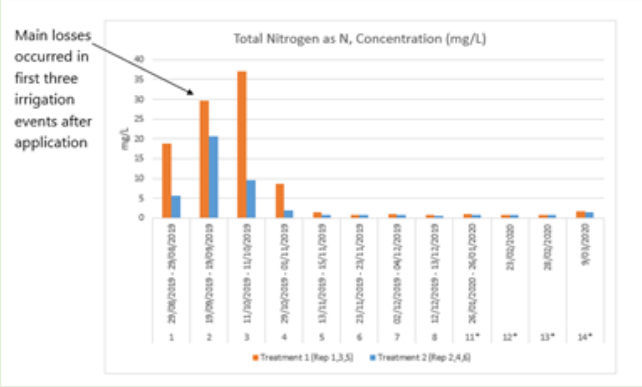
It was evident from all nine trials, seven of which were carried over two years, that the majority of nutrient and chemical losses occurred in the first few runoff events (irrigations and/or rainfall) after application.

Therefore, one of the main management actions that growers using furrow irrigation can take to reduce the losses of nutrients and chemicals in irrigation runoff, is to carefully manage the first few irrigations to reduce or eliminate the loss of tailwater from the farm.

This can be achieved through improved irrigation management (using scheduling tools such as IrrigWeb which advise when to irrigate based on soil moisture levels, rather than at set time intervals, automating irrigation to enable prompt switching off when water reaches the end of row and recycling of tailwater using well designed and appropriately managed recycle pits).

Rainfall events are more difficult to predict and manage, but rainfall losses can be reduced through maximising coverage/placement depth of fertiliser and careful timing of chemical applications to maximise no-rain intervals.

Most of the trends observed in the trials, were carried over into the second year, and due to addressing various site and trial issues identified in the first year, there was higher confidence in the second year results. However, ideally the trials should be continued for 3-4 years to provide more information on the relative merits of each management practice in different seasons and crop cycles.



Graph from one of the trials showing the commonly observed pattern of the main losses of product detected in surface runoff water occurring in the first few irrigations after application.

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