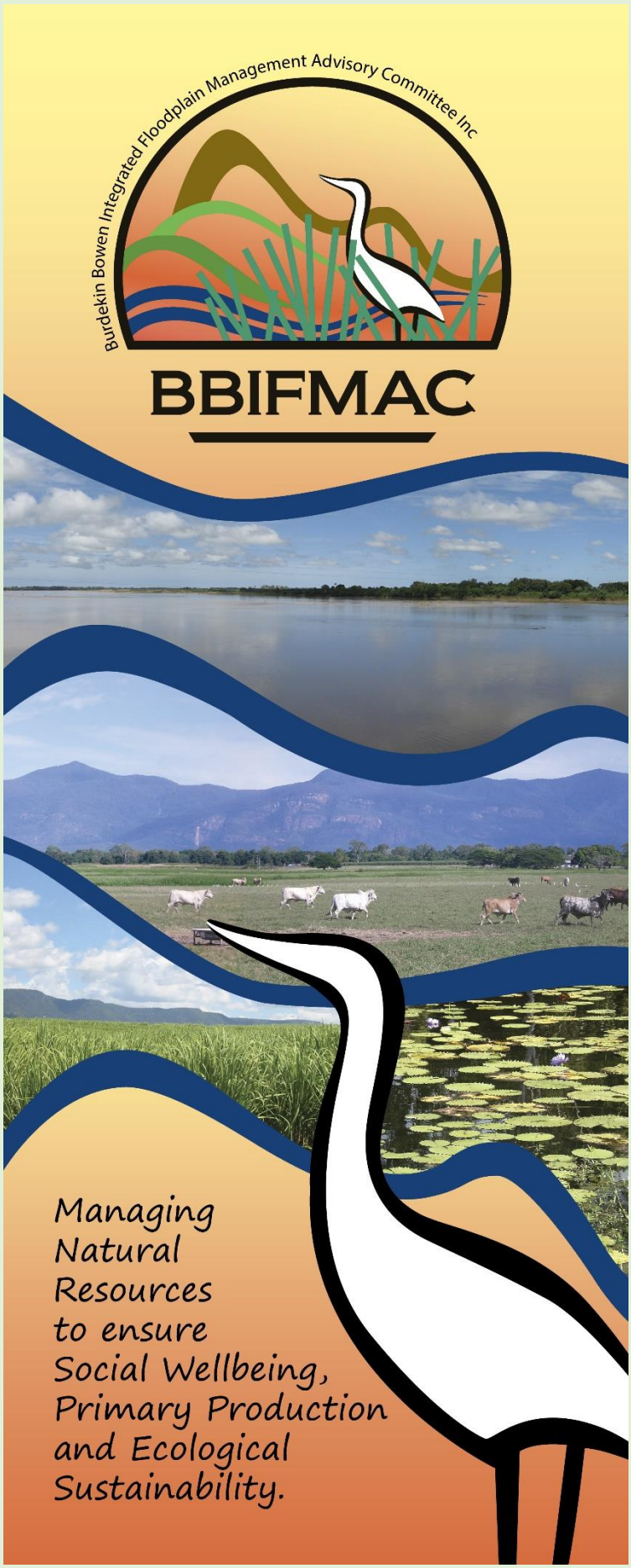
NEWSLETTER

Issue 7 November 2020



Recent Events

The winter spice trial at Rita Island which consisted of Kalijiri, Cumin & Kalonji was harvested in September/October, as part of the North Queensland Spice Trial being undertaken with Central Queensland University (CQU) and Kenrose Farming Co, with funding from the Cooperative Research Centre for Northern Australia (CRCNA). CQU will now assess the harvest data and determine the leading varieties which will be carried into a second year trial next winter.

BBIFMAC staff, Mackenzie, Dennis, Keeley and Arwen harvesting the spice crops and recording measurements of the plants for the winter spice trial.

The black sesame planting was recently undertaken at two sites for the second year summer spice trial.

After much success in the first year trials, larger scale black sesame summer crops have recently been planted at two locations in the region for the second-year trials.

The aim of these trials are to evaluate the suitability for future commercialisation of spice and condiment crops in Northern Australia.

Meet the BBIFMAC team!

We would like to take this opportunity to introduce one of our great BBIFMAC team members with each newsletter. In this issue we introduce Mackenzie Severns, Project Officer.

Mackenzie completed a Bachelor of Advanced Science at James Cook University. Mackenzie joined our team last year in a part-time capacity through her university work placement and has since been working with BBIFMAC full time. Mackenzie's role includes collecting field samples, in-house analysis, sensor calibrations, data entry, project reporting, and writing the BBIFMAC newsletters!

Reducing Burdekin Sediment Project

The 'Reducing Burdekin Sediment' Project is in its third year, with 12 farmers engaged in the project across the Burdekin region. The project is funded by NQ Dry Tropics (NQDT), and aims to reduce the impact of fine sediment, agricultural nutrients and pesticides on water quality entering the Great Barrier Reef Lagoon.

The local wetlands and waterways of focus are Kalamia and Liliesmere creeks, Plantation creek, MacDonald and Merryplain creeks, Saltwater creek, and the Lower Burdekin River.

BBIFMAC was contracted to support local cane growers through on-farm paddock scale water quality monitoring, and provide individualised water quality enhancement plans to complement the efforts that farmers are already undertaking to reduce sediment, nutrient and pesticide concentrations in irrigation tailwater.

Within the water quality enhancement plans provided to the 12 growers, several practice change suggestions are applicable beyond the scope of the project to cane growers across the Burdekin region. BBIFMAC acknowledges that not all growers are in the position to adopt the suggested practice changes, and advises these management techniques be implemented only where practical and suitable for the farm design.

These include:

- The use of **sediment socks on irrigation cups** to reduce sediment mobilisation associated with scouring of the furrow at the top end of the paddock.
- A **sediment basin** installed in the end-of-paddock drain which assists with slowing the flow of the runoff water and allows heavy silts to settle out.
- **Vegetated drains** which assist with slowing the flow of water, settling out of heavy silts and some nitrate removal. Regular maintenance is recommended to maximise efficiency, such as slashing of long grass to avoid flooding problems as well as noxious weed control.
- **Recycle pit** to assist with reduced loss of runoff water, settling out heavy silts and some nitrate recycling and removal. In order to maximise the ability of the recycle pit to filter the runoff water, it is recommended to vegetate the banks to prevent soil erosion.
- Reducing irrigation runoff and associated nitrogen losses in the first few irrigations after application, when the largest losses usually occur, through the use of **irrigation scheduling or soil moisture sensor tools**.

A sediment sock on the irrigation cups can reduce scouring of the furrow at the top end.

A comparison of two rows at the top end, the left with a sediment sock, and the right without. As you can see, the sediment sock reduces sediment mobilisation.

A sediment basin slows the flow of runoff water and allows heavy silts to settle out before the water continues down the end-of-paddock drain.

Vegetated drains slow the flow of runoff water, settle out heavy silts and some nitrate removal. To maximise efficiency, regular maintenance is recommended.

The 'Reducing Burdekin Sediment' Project is ongoing, and we look forward to reporting on further water quality outcomes in 2021.

BBIFMAC would like to notify you that our office will be closed from Monday 21st December, and reopen on Monday 4th January.

We wish you a safe & happy Christmas period!

Become a BBIFMAC member!

JOIN NOW FOR JUST $20 PER YEAR.

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- Free or discounted water quality tests.
- Discounted water quality monitoring equipment.

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