



Ayr cane grower Talbot Cox.

GOOD TIMING FOR THE BIP FOR ROCKS FARMING

Talbot Cox, managing director of Rocks Farming Company (RFC) at Ayr, has been growing sugarcane in the Burdekin for almost 35 years.

With approximately 2700 ha of irrigated cane farming land, RFC is one of the area's largest sugar producers.

Mr Cox says the Burdekin Irrigation Project (BIP) came along at a time when the company had just begun evaluating its irrigation practices, none of which were automated at the time.

"We were really looking at all of our irrigation practices in our cane. Water usage, irrigation efficiency, just trying to make things more efficient," Mr Cox recalls.

"The BIP came along at the same time and it was good because it made us go back to the start and evaluate everything, starting with getting some baseline data on everything we were putting into our field."

He said the company started by selecting a 100ha block that had proven to be more difficult to irrigate and also required higher water use.

"We started measuring flows and understanding what sort of water we were using per section of the block and certain parts of that block were using more water than other parts. This became very obvious when we tracked how many metres per hour

the water progressed down the paddock by the sets that were run.

"So, it got us thinking about what we could be doing better. We started adjusting flow rates up higher and higher, so the typical flow rate that we were using was about two litres a second, going down a furrow and then we'd push that up to four litres and then up to eight litres a second."

Pushing the higher flow rates meant that the block – which normally took one to two days to push water down the furrows, which was averaging 35 metres per hour progression down the furrow – was now getting through in seven to eight hours and was now averaging 140 metres per hour down the furrows.

"Some of our irrigation sets are now coming down in six hours, so the automation became the tool to allow us to do that. Because once you start watering between six to eight hours, manpower alone just can't do it. You can't be there six to eight hours changing over the paddocks. Automation allows that to happen. And, it's the scheduling software that works with the automation that makes the whole system work."

Operating each system from an application (app) on their phones, each Irrigation Manager uses the IrrigWeb scheduling tool, which tracks crop demand, inputs local rainfall data, and then calculates when the next irrigation should be

applied while keeping track of the irrigations that have been applied.

Working with AgriTech Solutions, Mr Cox said the BIP offered considerable technical support, to ensure their smart irrigation practice changes suited their individual needs.

"Between changing our practice, automating our valves, using IrrigWeb to schedule water applications, there was a lot of development of the software to make the product more robust and more capable of doing what we wanted it to do," he said.

"So, as we make these changes, it will become something that is good for the whole industry."

The company continues to expand its automated irrigation network and hopes to be fully automated within three to five years. For other growers considering automated irrigation, Talbot offers this advice.

"I would say to growers, don't just automate what you are currently doing. Start from a blank sheet and consider what is the best way to irrigate this farm and use the automation as the tool to water better. Now that could mean things like pipeline upgrades, or some riser upgrades or different spacings to get the flow rates that you need to get the water down to a more efficient manner. If you just put automation onto your current practices, it's just not the best money spent."



Moth borer damage to sugarcane.



Ratoon Stunting disease testing.



Yellow Canopy Syndrome sugarcane.

REVIEW OF SUGARCANE BIOSECURITY PLAN

The development of an updated Sugarcane Industry Biosecurity Plan, led by Plant Health Australia (PHA), is progressing and has reached an important milestone.

PHA has completed an extensive literature review and updated assessment of all the biosecurity threats facing the Australian sugarcane industry and have compiled a new draft set of Threat Summary Tables summarising the most significant biosecurity threats for the industry.

In December 2023, representatives from PHA met with SRA and Biosecurity Queensland staff to review the updated Threat Summary Tables, which will form the basis of the new Industry Biosecurity Plan.

The identification, prioritisation and management of key biosecurity risks, through the development and implementation of a biosecurity plan, are critical to industry's biosecurity preparedness.

The incursion of just one exotic pest or disease could significantly impact industry's yield and quality, as well as growers' market access both domestically and internationally.

Current biosecurity planning provides a mechanism for the

sugarcane industry together with governments and other stakeholders to assess current biosecurity practices and future biosecurity needs. Dr Stephen Mudge, SRA Manager of Research Missions, SRA Manager of Biosecurity and Disease Screening Dr Shamsul Bhuiyan and SRA's lead entomologist Dr Kevin Powell met with senior members of PHA and Biosecurity Queensland to review the Biosecurity Threat Summary prepared by PHA.

The next step in the development of the new Industry Biosecurity Plan will involve assembling a Biosecurity Implementation Group, comprised of both industry and government representatives. The Group will look at the industry's preparedness for high priority pests (including precautions undertaken by industry), and develop an action plan that describes the activities to be undertaken to improve biosecurity preparedness and response capability.

This same group will also consider possible on-farm biosecurity resources, both in terms of format and delivery. This meeting is being planned for April 2024, with the updated Biosecurity Plan to be released later in the year.

REGIONAL SUGAR MILLING RESEARCH SEMINARS

SRA supports milling research on behalf of the entire milling sector of the sugar industry. Each year in partnership with QUT, SRA presents a series of regional sugar milling research seminars to showcase the highlights of research.

Milling companies and their staff are invited to join seminars in their mill area to hear first-hand from SRA-funded researchers.

Locations and dates

Mackay – 8am–3pm, Mon, 18 March - (TBC) Training Room Racecourse Mill

Townsville – 8am–3pm, Tues, 19 March – Rydges Southbank

Gordonvale – 8am–3pm, Wed, 20 March – Rambler Room, Mulgrave Mill

Rocky Point – 8am–3pm, Mon, 25 March – Rocky Point Mill (AV link to NSW mills)

Bundaberg – 8am– 3pm, Wed, 27 March – Lakeside Room, Millaquin Mill

Topics include:

- Eliminating roll arcing
- Strategies to minimise impacts of processing existing soft cane varieties, and an industry cost/benefit analysis
- Bagasse fly ash system performance benchmarking
- Modelling the harvester's front end to reduce billet and stool damage - the behaviour of leaves
- Cane bin tracking and electronic consignment of cane.

For a full list of topics scan the QR code below:

