

# In Profile

## Sustainability working hand-in-hand with productivity

It's a sparkling early-May day at Brightley, and the vivid yellows of a field of Sunn Hemp pop against the deep blues and greys in the sky. The fallow paddock nearby - plants as tall as an adult - positively hums with pollinators: a cloud of all types of native and honey bees and others are harvesting pollens from the tall crop.

*" Andrew is almost always one of the first to put their hand up for participating in learning workshops and trials, and has maintained good yields ...and is also dedicated to developing sustainable management practices. "*

He's worked on projects with Reef Catchments such as the Sandy Creek project, and Project Bluewater with Farmacist. He is also a long-time member of Central Queensland Soil Health Systems (CQSHS). Andrew utilises SRA's Six Easy Steps, is also Smartcane BMP accredited, and uses the AGTRIX Farming web-based program as a data recording system.

The grower utilises a raft of sustainable management practices, across cover/break cropping, zonal and minimum tillage, data-driven irrigation, and a refined fertiliser and chemical input system that works to boost productivity, improve soil and minimise environmental impacts.

"Sustainability is a number of things," he said.

"It's been quite successful," says grower Andrew Vassallo. "I planted it because of the late crushing, and there wasn't too much seed available. The Sunn Hemp went in on the 26th of February. It was a late cut paddock, so I needed something that could grow quickly."

Sustainable systems lie at the heart of Brightley grower Andrew Vassallo's farming practice, so it is unsurprising that this year he was the recipient of the CANEGROWERS Mackay Sustainable Management Practices Award at the Mackay Sugar Productivity Awards.



Andrew Vassallo talks about Sunn Hemp as a late -plant cover crop solution on his Brightley farm.

In winning the Sustainable Management Practices Award, he was acknowledged by local sugar industry services: "Andrew is almost always one of the first to put their hand up for participating in learning workshops and trials, and has maintained good yields whilst being recently involved in nitrogen and irrigation trials with SRA. An advocate for break-cropping, Andrew is also dedicated to developing sustainable management practices.

Andrew is a third generation farmer in the Brightley area. His current property, farmed with wife Terese, was bought in partnership with his father, now retired. It's just a short way down the road from the one on which he grew up, bought by his grandparents in the 1950s and still operated by his younger brother.

The Vassallo farm is a mixed production system, running 80 head of Droughtmaster cattle, with 120 ha of cane production area.



Integration of cover crops and appropriately timed irrigation are fundamental to Andrew Vassallo's productive, sustainable farming system.

Andrew is also active in the region's agricultural services, serving on the boards of both Mackay Area Productivity Services and Eton Irrigation.

Irrigation, delivered in a timely manner and at volumes appropriate to soil moisture conditions are an important element in Andrew's farming practice.

The farm nestles against a seasonal streamline that feeds into Sandy Creek. While water sampling has been occurring through various regional land

and water management projects in Sandy Creek itself, sampling of water as it leaves the Vassallo farm has been part of Andrew's undertaking with personal responsibility around sustainability.

"I thought to myself: how do I monitor my farming practices on the averages as it [water] is going down Sandy Creek, rather than the water leaving my own farm," he said.

The findings armed Andrew with the information needed to fine-tune use and timing of

imidacloprid.

Buffer zones were being well observed in relation to streamlines.

Cover-cropping has been a consistent practice.

"I have been cover-cropping for a lot of years: sorghum, cowpea, soybean, sunflower and some multi-species crops as well. SRA did a multi-species fallow trial out here on my farm a couple of years ago."

On balance, he favours a single species fallow, ploughed in as green manure. Nitrogen fixers are good, but the key element is that the fallow is a strong source of biomass for the soil.

"The soil health benefits of working the cover crop back down into the ground are huge," he said.

He is confident after so many years working with cover crops, that there is great value in maintaining root structure in the soil, which is now being backed by emerging studies in soil science.

Over the years, he has observed change in his soil structure as a result of the practice.

"The soil tilth. The ground here was...not exactly poorer soil, but lacking organic humus. Now it's got a bit of body about it, it's easier to work."

Water infiltration has improved across the farm.

"I'm not getting crusting from irrigating. Especially on plant cane. I am getting better utilisation from my water: rather than running off, I am getting total available water."

The soil health improvements are helping productivity gains.

"Last year, I cut a record crop," he said with a grin. "The crops are getting more consistent across the whole farm. CCS has come



The Vassallo water retention pond is vibrant with life: birds, fish, turtles and platypus all find space and sustenance here.





down a little bit, but sugar per hectare is increasing, because of the tonnes. Even-ness across the property is the thing, though. Moving across the property, I have a few different soil types - a few weak patches. But with the program I'm on, it seems to even the crop out."

Natural soil types move from loam to gravelly to blacksoil.

Irrigation has also played an important part in raising productivity on farm. Building on ten years of utilising moisture probes, he has recently been working with SRA in an irrigation project utilising moisture probes as a informative tool in-paddock for irrigation timing. The centre pivot irrigation system introduced two years ago has been a further milestone in his sustainability and productivity

program. Andrew is motivated by a dual sense of stewardship and practical farm management sense.

"As farmers, I think we all need to play a part towards our environment, with the social licence part of things," he said. "And financially, I don't want to be putting chemicals on, and fertiliser on, if it's leaving my property. I think most farmers are greenies in disguise, if you know what I mean?"

Knowledge-sharing groups have been useful in improving practice. CQSHS involvement had helped the farmers involved gain skills in making use and understanding soil testing, while a Farmacist-facilitated Brightley growers group helped growers get on the same page with what was

needed in terms of practice change.

He said improvements and practice changes are being made by many farmers across the Brightley area, in terms of equipment and biocide application. Water sampling results are improving in Sandy Creek around Brightley, proving the worth of that unified approach to practice change.

"Everybody is doing the right thing, because in the latest water sampling, the numbers were right down. All the major chemicals were below the threshold. The farmers have done a terrific job."

He said the imidacloprid result was particularly impressive, "Because the applied area is actually greater now, because of the pressure of greybacks. Years ago we used to just target certain areas, but now the pressure has got so great that everyone has to do the majority of our farms."

Standing by the water retention pond at one of the lowest points in the property, Andrew points out the nearby treeline of Sandy Creek, and why the pond is a valuable testimony to what is being achieved on farm.

A heron wades in its shallows, ducks swim by. The waters edge is teeming with little fish and water striders. A finch busies itself in the grassy tufts on the shore.

"One year, we had a whole heap of platypus in here. I could use this for irrigation, but I don't. I'd rather leave it for nature." ■

Pond at lower corner of the farm



Sunn Hemp (Crotalaria juncea)



Sandy Creek, from Eton bridge



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# BILLET

MACKAY & PLANE CREEK

**PROFILE:**  
Andrew Vassallo's sustainability success

**HEADING TO HARVEST**  
Clean seed - Safety - Crop ripeners

**HAULOUT TRAINING:**  
The 2023 trainees

**EVENTS:**  
Calendar packed as the slack wraps up

