

MAINTAINING PROFITABLE FARMING SYSTEMS WITH RETAINED STUBBLE

Carey Partnership



PHOTOS: SARAH CLARRY

SNAPSHOT

Property: Oaklands

Owners: Michael and Kathy, Brett and Katrina Carey

Location: Coolamon, NSW

Farm size: 1800ha

Annual rainfall: 550mm

Soils: Red loam

Soil pH: 5-5.5

Enterprises: wheat, canola, barley, oats, pasture, 2600 Merino ewes with Poll Dorset rams.

Equipment: John Deere 8200 tractor, Horward Bagshaw seeder with disc undercarriage, John Deere 9860 header, Croplands spray coupe.

Left: Grazing Wedgetail wheat with self-sown clover. **Above:** Mick (left) and Brett Carey.

Adaptation and innovation

An appetite for continuous improvement drives innovation on the Carey's Coolamon property, where speed tillers have allowed them to retain moisture by leaving stubble residue in the ground.

Like many mixed farmers who experienced the hardship of drought in the early 2000s, Mick Carey started to think seriously about how best to conserve moisture during that time.

Mick and Kathy Carey farm with Mick's brother Brett and his wife Katrina at Coolamon. They crop wheat, canola, barley and oats, and run 2600 Merino ewes with Poll Dorset rams.

Rather than using fixed methods year in year out, Mick takes an agile approach to management, always looking for ways to optimise his operations, and adjusting and fine-tuning as he goes.

He began retaining stubble in 2004, in response to the dry seasons. Although it took a couple of years, he began to notice a difference and realised his approach was working.

"We absolutely knew we were on the right track," Mick says. "We were retaining more moisture and there was less erosion."

In 2009, Mick bought his first disc seeder to consolidate the move to a minimum till, full stubble retention system.

"When I first bought the disc seeder, Dad thought I was mad. It took him around three years to see that it was a pretty good tool, not only for the cropping program

and saving moisture, but also to allow you to leave your existing pasture in place and continue grazing it."

However Mick wasn't 100 per cent happy with the performance of the disc seeder.

"It worked fine in principle, but it was high maintenance," he says. "We found it compacted the seed too tightly in the ground and we were getting slower growth rates. That's fine if you have a 100 per cent cropping operation but we wanted our grazing crops to be available early for livestock feed, so we needed the plants to get out of the ground quicker."

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PHOTO: SARAH CLARRY

By moving the press wheel back and straightening it, Mick was able to get better chemical results and better growth rates.

Mick says he experimented for a couple of years, moving components on the disc seeder into different spots.

"I moved the press wheel back and straightened it up. I found that I got more aggressive soil disturbance this way, but I was still able to drill through the stubble," he says. "With more soil disturbance I was getting better chemical results and better growth rates. That led to me to making my own disc opener."

Mick found that not many commercially available disc seeders were adapted to their own spring heads. He was able to do so for about a quarter of the price of an original disc seeder.

"I've been using it ever since; it's been a great tool," he says.

Mick took the machine, named the Golden Valley Single Disc Opener, to the 2011 Henty Machinery Field Day, where he was runner up for Machine of the Year. He then won the award for Best Modified Machine at the Conservation Agriculture

Field Days at Lockhart, before winning Best Machine at the Australian National Field Days in Orange.

Following his success at the field days, Mick was approached by some manufacturers. He has a local supplier making the units to his specifications. "I've sold quite a few units, but it's a difficult market to get into," he says. "I know it works for my place and I'm happy with that."

SPEED TILLER

In 2012, concerns about the amount of chemical required for a minimum till system led Mick and Brett to consider working the stubble into the ground. They also wanted an option for green manuring.

When researching possibilities, they came across the speed tiller. They invited the rep to come out to their property and demonstrate the machine.

"We were immediately convinced," Mick said. "When you use it in front of a

normal offset disc, it leaves the ground nice and level. You don't need harrows to get the ridges out."

Mick and Brett could see the potential of the machine, and made up their mind the same day to buy it. Further discussions opened up the possibility of buying additional units and hiring them out, so they ended up buying four.

Previously, when they brought pasture country into cropping, they had to work the ground up with a scarifier. The speed tiller allows them to leave the pasture residue on the ground and just chop it in.

"They do a great job and we find we retain a lot more moisture that way, with the stubble in the ground. They are also the only thing that works for us on mature fleabane."

In 2014, they were invited by Farmlink to use the speed tillers in some research examining the strategic use of tillage in conservation farming.

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The business has slowed now as farmers hiring the units have begun purchasing their own speed tillers.

"Most of the farmers can see what a great job they do, so they go on to buy their own," Mick says. "The business is not as profitable as it was because a lot of people now have their own units. We unsold two of the units earlier this year."

Travelling around with the speed tiller business gave Mick the opportunity to examine other farming systems. As a result he has steered away from the idea of implementing a controlled traffic system on his own property.

"Some of our clients were using our speed tillers to level out compacted tracks from their controlled traffic operations. They would have water pooling in the tracks and end up with green head issues," Mick says.

STUBBLE MANAGEMENT

A run of wetter seasons since 2010 has seen Mick burn stubbles for the first time as a way to manage heavy stubble loads and disease pressure from scald and net blotch. On their lower country, it also acts as a frost mitigation tool.

"If we've had a bad season and there's only light stubble there, we won't burn, but in recent years we've had fungicide issues and issues with weeds, so we've started burning," he says.

"If a paddock needs a pre-emergent spray, we burn it, then spray it and either run the disc chain over it or we'll work it in with the speed tiller to incorporate the chemical. Then we'll come in and sow behind with the disc seeder."

To manage his chemical rotation, Mick also uses the sheep as a broader weed management tool.

"This year, we bought trade Merino



PHOTO: SARAH CLARRY

Sheep serve as a broader weed management tool in Mick's operation.

wethers and used them as a weed management tool instead of spraying. It was a good strategy because we cleared the wool off them and made a profit on that, and grazed the weeds instead of putting another spray application on."

Due to the 15-20 km distance from the home property, their bottom farm is currently sown to crops, with all the pastures taken out. But at the home property, under-sowing their long-season wheat with pasture provides more options at the end of the year.

"It gives Brett and I a different scope at the back end of the year," Mick says. "Do we cut paddocks for hay with the wheat and clover underneath, or do we blow the clover out and run with the crop?"

CROP NUTRITION

Their approach to nitrogen is to try to grow as much of it as they can with pastures. They used to grow lupins and field peas but found Group B resistance problems developing, and that it was

costing a lot of money to control weeds. Mick says he felt like they were painting themselves into a corner.

"When we first started the speed tiller, a lot of guys were growing peas as a brown manure crop to pick up their nitrogen, but the way I see it, you've lost a year of production. Many people have worked out now that it's not cost effective, and that's why we've grown more pastures."

"It is cheaper to get the weeds out of pastures, plus you're making money through the grazing."

They apply Single Superphosphate to pastures at sowing and then top dress again when they are established.

In the crops, they put on 80kg DAP up front, and this year are trying a different approach, top dressing another 50kg of urea as soon as the crop is established.

Mick's thinking behind this is to get the crop set up early up to shade out any weed competition and to help the plants – especially the barley – set their yield rate early.

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The 800m² roof Mick has constructed over his sheep yards provide flexibility in shearing, lower levels of animal stress and substantial rainwater harvest to recharge an adjoining dam.

INNOVATION

Mick's willingness to try different approaches isn't limited to the cropping operations. Last year, he put a roof over the sheep yards. At 800m², it represented a substantial financial investment, and raises a few eyebrows among visitors to the property, but he has been delighted with the outcome and the flexibility it affords him. In the hotter months, the stock benefit from the shade with lower stress levels. When it's wet, the sheep stay dry and the shearers don't have the problems of handling wet fleece. It allows him to schedule shearing in whenever it suits. He also harvests the rainwater from the roof,

which is channelled down through pipework to recharge a nearby dam.

Although Mick has been farming now for 37 years, he continues to grow and learn. He has an open-minded approach to new ways of doing things. His contracting business has provided him with plenty of opportunities to see what works and doesn't work for other growers.

"When I take the speed tillers out, I ask a lot of questions. Every now and again someone makes a statement that is a light bulb moment for me, and I'll come home and try it out. Other than that, we just do our own thing."



PHOTO: FOREVER ROSE

NEW OPPORTUNITY

When Mick and Kathy's daughter Gemma married her partner Brad earlier this year, it seemed the natural choice to have the wedding at home on the family farm. The ceremony took place in a lush paddock of clover and Mick and Brad transformed the old machinery shed into the reception venue. So impressed were the guests with the rustic venue that some of them made enquiries about using it for other functions. Gemma and Brad now hire the venue out for weddings and parties, adding a novel revenue stream they never envisaged.



PHOTO: SARAH CLARRY

"The drought made us aware of retaining moisture instead of working the country up all the time. We got smarter about retaining stubble," Mick says. "Retaining moisture is the big thing for us now."

MORE INFORMATION

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Golden Valley Implements single disc assembly

<https://youtu.be/DEXXr6DZG34>

