

Drew Watson with this year's crop being harvested.



## Long term focus on improvement in the Wet Tropics

*Mossman farmer Drew Watson says the well-known Tully saying 'no drain, no cane' has strong application in the Wet Tropics and drainage improvement should be one of the first steps in improving farm efficiency. By Brad Pfeffer*

Even after more than 133 years of cane farming history that has occurred on the home property at Mossman, Drew Watson admits that there are always new investments that can still be made to improve efficiency and drive productivity and profitability.

The Watson family marked their centenary at the Mossman property Brie Brie Estate in 2005, which is the foundation property in the district where sugarcane was grown dating back to 1883.

Fast forward to today, and much has changed and brothers Drew and Gregg Watson continue to look for ways they can improve efficiency at Brie Brie Estate, as well as other properties they lease and own in the region.

This has seen them continue an ongoing program of improving drainage at their properties, which in recent times has evolved from laser levelling to global positioning system (GPS) assisted smoothing.

The average annual rainfall at Brie Brie Estate at Mossman is in the range of 2500mm per year, and with some heavier soil as well, drainage is crucial.

To get the job done, he uses a bucket that is owned by Mossman Ag Services, which was bought thanks to a financial contribution from the local CANEGROWERS, and then shared among the region's growers.

"We have used laser grading for more than 15 years here, and I am a firm believer that if there are flat spots in the paddock then these spots just won't grow cane," Drew Watson said.

"My philosophy is that we have to get the drainage right first and then look at additional things. For example, I would love to do an EM survey of the place, but I know that this is pointless if there are puddles in the paddock."

Research has shown that for every 24 hours sugarcane spends underwater, yields of cane are reduced by half a tonne of cane per hectare.

He said the GPS was possibly slightly less precise than laser levelling, but it was far less labour intensive. He already has GPS in several tractors and also within the harvester, so starting the process of the smoothing is simply a matter of driving the paddock to map it out, with this data then fed back to a computer at the productivity office in town.

"The only downside is the accuracy of the satellite," he said. "It is supposed to be accurate to 20mm left or right and it is usually 10-12mm accurate, but when you are talking height, rather than left or right, the inaccuracy can double."

"So previously we could probably get away with a slope of 0.1 percent with the laser, where with the GPS smoothing you might have to go just a little bit more. Having said all that, it does a very good job at the end of the day, particularly on paddocks that have undulations and required a lot of work with the laser."

This year, his focus was on three paddocks that were at the end of the crop cycle and therefore presented an opportunity to improve the drainage. The forecast for the wet season was that it should be reasonably dry, and this year would therefore have been a good opportunity to get the job done.

The actual weather turned out wetter than forecast, with significant rainfall in December 2015 that delayed the levelling much further into the wet season. If there had been a drier start to the wet season and a completion of the levelling then this would have allowed for a quick crop of rice in a shift from their usual choice of a green-manure legume.

However, the weather stopped this from occurring, meaning the ground was only ready in time for May sugarcane planting ahead of a short-term forecast of good rain that would get the crop established.



**Above:** This plaque was laid on the centenary of the Watson family at Brie Brie Estate in 2005.

"Unfortunately that rain event in May turned out to be 250mm within a few days of planting, so not even the best drainage job could have saved the cane that was planted. It certainly wasn't the fault of the drain, and in most years and most times I think the drainage will do the job," he said.

"All three paddocks are fairly long rows that run from lighter soil to heavier soil at the bottom end where they drain out, so drainage is important."

Their drainage plan also links back to making sure that they have a range of options for cutting during a wet harvest season.

"We have an ambition to have one third of the farms fallow as usually green manure crops, and two thirds replant. When we get 2500mm of rain in a year, we feel sometimes we need a paddock to sacrifice in the wet, so then at the end of the year if there are paddocks that have been bogged out these are the ones that are ploughed out."

They have also shifted to wider rows of 168cm, which Mr Watson concedes is not as good as 180cm, but he still sees that it delivers benefits compared to their previous narrower rows.

"We changed over about eight years ago, and our older ratoons are looking a lot better, which I put down to us not running over the ground as much. Compaction is our enemy.

"We cut our own cane here, so we are adamant that the haul-out drivers need to drive straight."

He sums up that he is cautiously hopeful of a good crop in 2016, but doesn't want to get to optimistic before all the paddocks have been cut.

"I was recently speaking to another farmer from the Burdekin and showed him my rainfall chart. Our rainfall for this crop has matched pretty closely to what ideal irrigated conditions would be, so in theory this should be as good of a crop as we can grow."

#### More information

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