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Levelling delivers major productivity boost in the Wet Tropics

Pfeffer, B

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Far North Queensland sugarcane grower Paul Gregory has seen an impressive productivity and profitability response by laser levelling and now says it will be part and parcel of his farming operation. By Brad Pfeffer

Farming on what he describes as “the margin” only about 4.2 metres above sea level, Far North Queensland grower Paul Gregory has seen huge benefits to his operation from a recent laser levelling project at his farm.

For Paul, productive cane growing is about moving water off paddocks, particularly as he has low-lying country where the drains can be influenced by the tide.

“Drainage is paramount,” Mr Gregory said. “On the farm there are two streams, one on the border and another through the farm, and the banks of those streams are basically the highest point, meaning between the banks there is a lot of country that holds water. For a long time we have been trying to best manage our water and improve productivity.”

His main concern had been the cost of levelling. So when the opportunity arose to take part in an SRA-funded project run by MSF Sugar on laser levelling, he saw that it was an opportunity to learn if the investment would be worthwhile.

After levelling in late 2014 and planting in 2015, the figures for the 2016 harvest are impressive.

The trial included 9.6ha lasered and 6.6ha non-lasered, with the lasered block yielding 19 tonnes of sugar per hectare (TSH) compared to 11 TSH for the non-lasered. The lasered section delivered an improvement in net return of $1700/ha.

“It is part and parcel of the farming program now, and I won’t plant a stick of cane into ground that is not levelled if I can help it.”

“At a rough cost for contracting of $250 per hour, and the work done at about an acre an hour, it is a big difference compared to $1700/ha return.”

Driving around his paddocks in January this year, the benefits are also clear. The tail ends of the lasered sections are wet with water slowly draining out, after an extended period in January where the farm averaged over 25mm of rain every day.

“Every litre of water that drains out of there improves my productivity,” Paul said, pointing to the difference between the two sections of the trial.
The water may be in there for a week, while without the levelling it could have been two months.”

Cane Supply Field Officer with Mulgrave Mill, Matt Hession, ran the project, which had been conducted on four farms in the region.

“Overall, the results were mixed with two of the demonstrations having a positive productivity response to the levelling work in all four of the main productivity benchmarks (TCH, TSH, CCS, net return). The third successfully harvested demonstration showed a positive response to the levelling in only the benchmark of CCS and net return was high in the non-lasered,” Matt said.

The fourth site could not be harvested as part of the trial because of the problems associated with the very wet harvest.

“As a result of the performance from the demonstration, three of the growers are now undertaking additional levelling work at their own cost on further paddocks, and the other grower is looking to purchase their own unit,” Matt said.

Back at Paul’s farm, he is also introducing zonal tillage, and widening rows to 1.85 metres with controlled traffic and GPS guidance. Along with the levelling, this is hoped to create more productive ratoons.

“2016 was a difficult harvest and it was only the 75-90 percent harvest round where I was actually able to cut where I wanted to go,” Paul said.

“Of the 23,500 tonne, everything was cut with a tracked harvester, including material for plants. But the first ratoon cane under the new system has no damage to the stool. There are ruts of course, but the stool is intact.

“My worries about loss of yield with the wide rows are gone and under this system the ratoons will be better.

“If I can get yield gains and four fewer fill-ups of my diesel tank in a season, I’m happy.”

He has also been able to prepare country for planting much easier by not having to work the ground as often.

“We only had limited windows last year, but I was still able to get 43ha of ground ready, whereas before I would have only done about 16ha if I was lucky.”

Part of Paul’s improvements at the property are a result of a MSF Sugar venture called Project Uplift, which is working with growers to drive productivity outcomes.

As part of the venture, growers adopt modern farming system practices as part of a collaborative approach to boosting productivity.

He hopes that this will assist him to move to a fully controlled-traffic and lasered farm within the next five years.

“It is a generous scheme for the grower, and very beneficial to both of us (grower and miller) in increasing productivity.”

More information
Matt Hession
(07) 4043 3307
MatthewHession@msfsugar.com.au

Below: Results of the levelling trial at Paul Gregory’s farm, Redbank, in the Mulgrave Mill area.