



BMP journey delivers economic outcomes

Adoption and accreditation of improved practices is delivering sustainability and profitability outcomes for Chris Bosworth.

Herbert region farmer Chris Bosworth has been on the journey towards improved farm practices for more than 10 years, so he saw the next step to Smartcane Best Management Practice (BMP) accreditation as a logical progression for his business.

For Chris, who farms 150 hectares supplying the Victoria Mill, he felt strongly that there would be profitability and sustainability outcomes in improving and recording his farm practices.

With BMP accreditation now achieved, his adoption of the program and additional practices has been the subject of an economic analysis conducted by the Department of Agriculture and Fisheries (DAF) as part of a project funded by SRA.

Economists at DAF found that, since 2008, Chris's transition has resulted in an annual improvement in farm operating return of \$78/ha (\$11,305/yr total). An environmental assessment completed on Chris's farm by senior Lifecycles scientist Marguerite Renouf also indicated:

- Less nitrogen, phosphorous and pesticide active ingredients being potentially lost to waterways

- Annual fossil fuel use (over the cycle of sugarcane growing) reduced by 14 percent
- Greenhouse gas emissions reduced by 15 percent annually.

Chris's main changes included widening his row spacing to 1.8m to match the wheel tracks on his contractor's harvester (to reduce compaction and improve soil health), moving from conventional to zonal tillage, planting in preformed beds, adopting the SIX EASY STEPS nutrient guidelines, adopting banded mill mud application in ratoon cane, and using a variable rate spray controller installed on his high rise sprayer to improve the accuracy of his spray rate.

The economic study showed that some of the biggest savings came from the adoption of SIX EASY STEPS nutrient program and using banded mill mud (saving about \$92/ha). Wider row spacing, which reduced tractor hours, as well as zonal tillage, contributed cost savings in fuel, oil and labour of about \$35/ha.

Investments included a stool splitter, modifying a spray rig, purchase of

ratooning discs converted to a bed-former, GPS guidance, and variable rate controller.

"Results of the investment analysis (includes capital expenditure costs) show that BMP adoption was worthwhile for Chris and has added value to his farming business," said DAF Agricultural Economist Caleb Connolly.

As part of Chris's previous work improving farm practices, he had historically been partnering with a neighbour to invest in gear and together they also bought equipment through the (then-called) Reef Rescue program. This Reef Rescue funding was not factored into the economic analysis, as the project team wanted to consider if the investments stood on their own two feet.

"I firmly believe there is scope for smaller farmers to partner together with like-minded farmers to improve efficiency of their investment," Chris explained.

"In our case, both my neighbour and I don't both need three-row stool splitters sitting in our sheds for 49 weeks of the year, and nor could we both justify the roughly \$65,000 investment.



“There’s a lot of scope for economy of scale, and it also proved to be a more efficient use of a government grant.”

“However, it was important that the case study showed to people that while grants can help, you also don’t have to have them to make it viable, which was the case for me.”

Overall, Chris says he is glad for his work on BMP, not only because it has made him more profitable and sustainable, but it has made him a better farmer generally.

“Environmentally, it is also important that we continue to reduce our footprint,” he said.

“The Great Barrier Reef is a critical part of our coast and we want to continue to protect it.”

“It’s quite simple. I’m paying for nutrients, whether it is in fertiliser or in mill mud. So why would I want it getting off the farm?”

The adoption of management practices that have been scientifically validated, such as BMP, means that an adverse impact on production is unlikely. However, results of a production risk analysis did show that in this case study profitability was highly sensitive to maintaining yield. Growers are encouraged to consider their own circumstances and seek independent advice before making changes. ■

DAF’s Farm Economic Analysis Tool (FEAT) is available to help growers consider the economics of their farming business. To access FEAT and explanatory resources, visit www.daf.qld.gov.au/plants/field-crops-and-pastures/sugar/farm-economic-analysis-tool.

The six project case studies can be downloaded from www.publications.qld.gov.au/dataset/best-management-practices-for-sugarcane.

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CHRIS BOSWORTH

(Above) An economic analysis of Smartcane BMP adoption has shown Chris Bosworth’s transition to BMP has resulted in an annual improvement in farm operating return of \$78/ha.