As a cane farmer managing over 800ha in the Barron Delta in Cairns, Mark Savina is very conscious of the impact of his farming practices on both his neighbours and the sensitive end-of-catchment environment he operates in, including the Great Barrier Reef. Mark is actively involved in trialling several new practices and innovations on his family farm. The funding he received from the Australian Government’s Reef Trust Tender – Wet Tropics program has helped him to compare and evaluate crop production from his trial sites.

Some of the trials Mark is undertaking on his family farm to reduce his conventional nitrogen inputs include:

- Application of three different rates of nitrogen fertiliser in strip trials (140N, 110N and 54N) over three years with the lowest rate being supplemented with biological inputs.
- Use of different cover crops to increase his organic matter and build soil health.
- Working with microbiologist Willem London to trial biological trash conversion and nutrient liberation to minimise the need for fertiliser. It is expected that this will reduce nitrogen application by up to 55%.
- Evaluation of the nitrogen contributions of two different types of legumes.
- Use of enhanced efficiency fertilisers. Mark is combining these trials with Crop Spec precision technology (purchased through Reef Trust Tender funding) so he can apply N only in specific areas that need it.

"The crop specific device will need a lot of trialling as it has not been used in the Australian Sugar industry before. I have a number of people helping to proof the system," said Mark.

So far Mark says it is too early to comment on the impact to his profitability of reducing nitrogen application. He is presently working on two years of harvest data, which will show the returns and profitability after harvesting from each trial and is looking very positive.

Innovation is a risky process and it takes time to conduct and evaluate trials to the point where there is sufficient confidence in the results but Mark continues to heed the words of his father who said to ‘always leave the land as good as you got it, if not better’.

“It takes a year to collate trial results and even then growers need to take into account how differing weather patterns might affect the outcomes. But we wouldn’t be able to conduct these trials without the support of the Australian Government and other organisations like Terrain,” he said.

For more information contact Terrain NRM on (07) 4043 8000 or email info@terrain.org.au or visit our website www.terrain.org.au