

PAUL VILLIS

2012

Paul Villis
Burdekin
farmer



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Project: Drip Irrigation

Paul Villis manages 360 hectares of land and has 40 hectares of his own property under sugarcane production at Kalamia, near Alva Beach, which is part of the Alva Creek catchment area.

Paul first installed trickle irrigation on one hectare in 2008. This was followed by a further five hectares in 2009, and 4.5 hectares in 2010, resulting in a total of 10.5 hectares under trickle irrigation.

Paul's farming system includes reduced tillage through the use of zonal tillage and bed forming. Paul incorporates rotational fallow crops and prefers a legume crop if the season suits. He is also using a stool splitter to apply sub-surface granular fertiliser and looks to apply small amounts, more frequently, if practicable. Paul has started EM mapping and will continue to do so.



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Project: Drip Irrigation

Paul received some support through Reef Rescue to purchase and install trickle irrigation equipment on his property. He has been working closely with product manufacturers and a CSIRO consultant Steve Attard to support Paul and link him to the irrigation scheduling tool, WaterSense.

Paul will be testing the economic and environmental benefits of trickle irrigation in sugarcane. He will also look to develop fertigation plans with Peter McDonnell, through Project Catalyst.

On his own 40 hectare farm, Paul is implementing a GPS-guided 1.83m Controlled Traffic System. In the future, Paul plans on looking at a shielded sprayer to apply more knockdown chemicals.

Issue being addressed:

Soon after Paul took over the farm he noticed that the conventional flood irrigation system was difficult to manage. Some of Paul's farms were irregular shapes and variable slopes making it very difficult and costly to irrigate. Paul was also concerned that much of his water was lost to deep drainage and being available to the crop.

Solution being tested:

To improve Paul's water use efficiency and reduce his water loss Paul has installed a sub-surface drip irrigation system that provides small volumes of water more frequently to maximise water use efficiency and reduce losses to deep drainage.

Results:

The benefits of trickle irrigation include the use of fertigation to apply smaller amounts of nutrients, more frequently, or when required. The GPS-guided 1.83m Controlled Traffic System will also help to reduce the cost of installing the trickle irrigation system, due to fewer rows per hectare.



Drip irrigation equipment at Paul's farm



Drip irrigation provides water to the crop root zone



Underground pipes connect all the rows of irrigation equipment together

What is Project Catalyst?

Project Catalyst is a pioneering partnership which reduces the environmental impact that sugar cane production has on the Great Barrier Reef (GBR). The project is 'grower led' – and involves a group of innovative farmers (termed A-Class growers) that are developing and testing management practices that improve the water quality of the water leaving sugar cane crops.