

NSW SUSTAINING THE BASIN *Irrigated farm modernisation*

Steve Carolan Waverley, Wee Waa

May 2016

Location: 'Waverley', 30 km west of Wee Waa

Water sources: Surface water Pian Creek / Lower Namoi and groundwater

Soil type: Self mulching, grey clay

Enterprise: Cotton

Existing irrigation system: Furrow irrigation

Total area irrigated: 109 ha

Total savings: 163 ML with 58% returned to the environment.

With his farm manager, Andrew Greste, Steve Carolan wanted to steer away from siphons, so they decided to install automated, permanent through the bank pipes.

Mr Greste said that not only were they looking at increasing efficiencies and trying to reduce labour, but also at the way they irrigated.

Description of the project

Steve Carolan was successful in Round 4 of STBIFM.

His project involved converting existing syphon irrigation fields to pipes through the bank (PTB). and the new system was designed to improve field application efficiency.

The PTB conversion involved:

- Automated structure feeding a secondary channel split into 300m sections
- Upgrading headditches to act as sub-supply channels
- 75mm buried PTBs on 2m spacing feeding semi-permanent rotabucks

"...without receiving funding from STBIFM, it would have been too financially risky to automate my irrigation infrastructure."



Permanent pipes through the bank (PTB) at Waverley, Wee Waa

The benefits of the project

The benefits associated with the automated system include massive labour savings, flexibility in irrigation run times and being able to adjust irrigation flow rates to dramatically improve water efficiency.

Mr Carolan also commented on how the automated system made cropping so much more flexible.

"If the rest of the farm was set-up like this, we would have every paddock 'turn-key' ready to irrigate at any time. We could decide in winter to irrigate grains, already be setup, not have to go and shift pipes, and have the flexibility of moving around the farm."



Automated PTBs at Waverley, Wee Waa

NSW SUSTAINING THE BASIN *Irrigated farm modernisation*

Will you be putting more in?

Mr Carolan would like to increase the scale of his farm modernisation, and said that due to the extent of subsidy offered by the STBIFM program, he would be financially confident to shift to automation on a larger scale.

The program has allowed him to modernise his system in a way that, prior to receiving the funding, was too financially risky to implement. Seeing the results of automation in research trials and on paper, Mr Carolan had been thinking about converting to an automated system for some time. All he needed was external funding, and that's where the STBIFM program was able to assist.



Andrew Greste and Steve Carolan (Waverley) and Peter Verwey (project officer STBIFM) at Waverley, Wee Waa (image: M Jenson)

What are your thoughts on the Irrigated Farm Water Use Efficiency Assessment (IFWUEA) process?

Farm planning funded through the program has been a valuable tool for many irrigators, which is why financial assistance for the preparation of an IFWUEA has been expanded to all catchments in the program area.

IFWUEAs help irrigators locate and quantify on-farm water losses, and that information can then be used to look at options to improve on-farm efficiency.

Mr Carolan found the IFWUEA process extremely useful when planning for his infrastructure modernisation project. The assessment reinforced his thoughts about the anecdotal water losses on Waverley being correct.

NSW Sustaining the Basin: Irrigated Farm Modernisation (STBIFM) program is funded by the Australian Government's 'Sustainable Rural Water Use and Infrastructure' Program, as part of the implementation of the Murray Darling Basin Plan in NSW.

© State of New South Wales through Department of Trade and Investment, Regional Infrastructure and Services 2016. You may copy, distribute and otherwise freely deal with this publication for any purpose, provided that you attribute the Department of Trade and Investment, Regional Infrastructure and Services as the owner.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (May 2016). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser. Published by the Department of Primary Industries, a part of the Department of Trade and Investment, Regional Infrastructure and Services. INT16/51760