

# Where there's a willow, there's a way

## Environmental management case study

### Summary

- Issues with winter flooding and stock accessing the Curdies River were motivation for the Davis's to make changes.
- With advice and full financial support from the Catchment Management Authority, over a four-year period they were able to remove invasive willows, fully fence and revegetate approximately two kilometres of river frontage on their property.
- The benefits of the project have been:
  - Removal of direct stock access to the river.
  - Establishment of trees that provide shade and shelter for the cows.
  - Increased water flow, reducing the impact of flooding events.
  - Improved health of the river and native wildlife.
  - The aesthetics of the farm have improved, and the river is now a beautiful part of the property.

**"While we don't always notice some of the good things we have done, it has been important for us to look back on what we have done and the changes we have made."**

*Craig (Reggie) Davis*

### FARM SNAPSHOT – LILYDALE DAIRY FARMS

#### Craig (Reggie) and Tanya Davis – Tandarook, South-west Victoria.

The Davis family run 780 cows over two dairy farms with herds of 530 and 250 Holsteins. The total area of the property is just over 2,000 acres with total milking area of 1,040 acres and just over 1,000 acres of support area.

Reggie grew up on the property when his parents started dairy farming there over 60 years ago. Reggie and Tanya's children are also taking part in the day-to-day operations. Their son Lachie runs the recently purchased 250-cow, 390-acre dairy farm, which adjoins the 530 cow dairy property.

#### Farm system

- A pasture-based system with some irrigation (ground water) with a split calving system for the 530-cow herd and autumn calving for the 250-cow herd.

- The 530 cow herd produces approximately 390,000 Kilograms of milk solids (kgMS) per year, which is supplied to Saputo. In addition to this will be the milk production from the new 250 cow farm.

#### Farm features

- Located on the Curdies River, that starts just before it enters the Davis property.
- There are also drains and creeks on the farm, that feed into the Curdies River.
- The farm is diverse in its topography with a mix of gravel banks, black clay river flats and volcanic soil.
- There are some dormant volcano cones on the property as well as a small amount of volcanic country which has some stones.
- The average annual rainfall of the area is 750mm, and winters can be wet and cold.
- The Curdies River, associated creeks and drains cause some low-level flooding in the winter months.

## Business purpose

The Davis family is focused on growing the business so that it supports the next generation. They enjoy working on the land and with animals and realise that to ensure you have healthy animals and a great quality product, you need to care for the land.

The Davis family place great emphasis on the health of their soil knowing it underpins the health and production of their pastures and subsequently their cows. Fourteen years ago, they started trialling compost as a form of soil conditioner on their farm.

Today, this is the main method they use to improve the health of their soils and pastures.

They also have a great relationship with their local Heytesbury District Landcare Network and the Corangamite Catchment Management Authority (CCMA). They are continually looking at opportunities to learn more about how to best manage their farm and for extra support and funding that might be available to them.

## Practice change

### Issues identified

Prior to 2015, the Curdies River that runs through the southern part of the property, was not fenced. With direct access to the creek, the cows were degrading the banks of the river, and during drier months they would also cross the creek and access other parts of the farm, requiring additional labour to manage impacts.

Another issue was the prevalence of willows along the riverbanks. While these provided some shade for cows in the summer months, they would restrict the flow of water during wet periods.

### What's the problem with willows?

- 1 Willows degrade the condition of rivers and riparian land. They crowd out native plants and reduce native biodiversity.
- 2 They are highly invasive – producing large quantities of seeds with many varieties spread through broken branches.
- 3 Erosion can be initiated by willows – with their extensive root mats, willows trap sediment and organic matter, which contributes to raising the riverbed level and diverting flows into and over the bank. This results in increased erosion.
- 4 Willows along creeks and rivers are big users of water. They extend their roots into the waterway and use large amounts of water, drying out surrounding areas.



*Willows on the Curdies River*

### Changes made

- 1 Started to fence and plant out 200 metres along the Curdies River. They met with the CCMA, which was able to support the family with a four-year plan to complete the following:
  - Remove all the willows.
  - Fence both sides of the river.
  - Plant trees in the riparian zone.
  - Manage weeds.
- 2 This work was completed over two kilometres of the Curdies River over a four-year period. Due to the size of the project, it was completed in three stages to allow sections of the river to be completed one at a time.
- 3 The costs of the river restoration were covered by the CCMA. They also supported with the management of the project, including coordination of the contractors to remove the willow and provision of the trees.
- 4 Since the completion of Stage 3 (three years ago), the CCMA have also provided advice and support with the management of weeds (emergence of willows, blackberries etc.).

### Benefits of the change

There have been many varied benefits to the property since the completion of the project:

- 1 The cows no longer have direct access to the river.
- 2 The trees provide shade and shelter during summer and winter.
- 3 As the trees have grown, the weeds along the river are becoming less of an issue.
- 4 Native animals are now seen along the river including, koalas, possums and wallabies. Bird life has increased.
- 5 During the wet months during high rainfall events, the water now gets away more quickly. The paddocks around the river area don't stay wet as long as they previously did.
- 6 The river is much healthier than it used to be. There is no erosion, the water is clearer and flows freely through the trees.
- 7 Being down along the river is a beautiful place to be. It is a nice place to feel relaxed and take in the natural environment.

## The future

- Reflecting on the work they have done on their main property, the Davis's are now keen to make some improvements to the new dairy farm they have recently purchased. Presently there is no long-term written plan for further development of the farm, but they plan on making continuous improvements each year.
- Continually planting new shelter belts and are looking to trial some on the 'black clay flats', which have previously been difficult to establish.

## Learnings

- Seek support and grants from organisations such as Landcare and catchment management organisations.
- Do things in stages. Manage your time and do things within your means.
- When fencing waterways, don't put the fences too close to the edge of the river. The river and the plants need space, and you don't want it too crowded.
- Use a mix of plants and don't put them in rows – spread them around for a more natural look and better effect.



Native trees providing shade and shelter around an underpass

**"We wouldn't have been able to do what we have done without the support of the CMA and Landcare."**

*Craig (Reggie) Davis*



Looking downstream along the Curdies River along a fenced riparian zone.

### FOR FURTHER INFORMATION

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