

CASE STUDY

ADAPTING TO WATER PRICE AND MARKETS GOVERNS WHAT YOU GROW

Plan2Farm irrigation business planning

Summary

Farm: Doug and Tamara Perryman
Location: Boort
Farm area: 650hectare (ha)
Industry: Mixed farming
Livestock: Sheep
Infrastructure: Channel – surface irrigation
Crops: canola, faba beans, corn (grown for grain), barley, wheat, vetch, oats, tomatoes

Strategies

- Improve irrigation infrastructure - be set up to fully use water when you can.
- Understand water markets and costs.
- Flexible farm system - flex between dryland and irrigated.
- Utilising livestock to optimise the system.

Background

Doug operates a mixed farming business growing summer and winter crops and running 550 merino ewes joined up with white suffolk rams, lambing around March-April.

The total farm area is 650ha, with 400ha under irrigation. He also leases an adjoining 160ha of dryland and share farms another 90ha irrigation block.

He describes his farm as established but still developing. The farm was fairly run down when Doug and Tam purchased the main block in 2015 and the decision was made to improve the irrigation infrastructure to ensure that water could be used effectively. When selecting the system Doug invested in the future and purchased an automated system in excess of their requirements. Now almost 90% of the farm is irrigated, and the automation has proven a sound investment, due to the improved irrigation efficiency and labour savings.

Doug uses his knowledge of water markets and how to utilise available water to optimise farm systems to make decisions on crop rotation and the sheep enterprise. He has a plan which he reviews regularly so that he can adapt to the season ahead.

Doug also works as an agronomist and grows similar crops to his clients, but on a smaller scale, which gives him practical knowledge.

How did you change the way you use water in your farm business?

Doug purchases water on the temporary market, so he has implemented changes to build flexibility into his system allowing him to quickly respond to water price. He is tracking the market and making regular decisions on whether to irrigate crops, run a dryland system or adjust the mix of both.

The irrigation infrastructure on both blocks were run down and although it is a big financial outlay to establish or even modify an irrigation system, he decided to invest, wanting to be able to take full advantage of water when it is available and affordable.

A whole-farm plan was developed and it took two years to implement the upgrades. Doug rearranged the farm layout to create longer and bigger bays. The advantages he saw were:

- A longer bay means less irrigation infrastructure per hectare spreading the capital burden over a greater area.
- There is a smaller ratio of channel and outlets compared to number of paddocks, increasing efficiency and reducing maintenance and water losses from the system.
- Fewer service points with only two outlets on the property reduces annual fees.
- It's easier to run fertiliser (Urea) with the irrigation by having less service points on the property.

When the irrigation system was upgraded, the small dams on the property were filled in, and at least one trough installed in each paddock (which are fed by the main dam). This decreased the risk of sheep getting stuck and helps ensure good water supply for livestock.

What impact did the changes have in ensuring your business is more resilient in the future?

The changes have allowed flexibility in the cropping system. In 2018 Doug bought water, although it was expensive. He did the calculations, grain price was good so it was profitable to irrigate. When grain prices are low and water prices high, Doug doesn't irrigate, he switches back to dryland and cuts hay.

The aim is to maximise profitability.

"Water use is opportunistic, you have to watch the water market and climate outlook"

an Pty Ltd 2021

Map





Doug strongly believes "you have to be prepared to take full advantage of your assets when conditions change" so he has also built hay sheds to ensure he is able to store on farm.

Generally, the risk of water being expensive in spring has led Doug to focus on winter crops. For example, he sees holding a paddock for corn and then deciding not to sow as a missed opportunity with the paddock unproductive for 12 months.

In 2021/22 Doug grew corn for the first time because water was cost effective. To mitigate some of the risk of not putting a summer crop in, clover, vetch and oats were sown for sheep to graze during winter. After the sheep had grazed it down and it was close to spring sowing, Doug sprayed, worked the paddock to incorporate fertiliser, and sowed corn. The sheep were then moved to dryland vetch paddocks. This means he's effectively getting one and a half crops out of that paddock optimising land and water use.

Doug's also tried different crops, including poppies. He always bases his decision on which crop to grow factoring in the best gross margin and water use efficiency.



Are there additional changes you are planning to make in the future and what will they be?

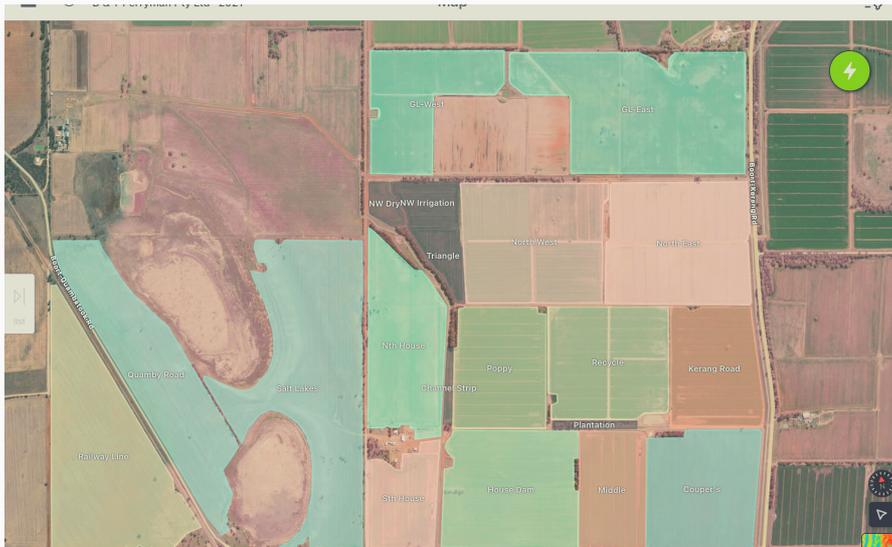
To help with drought management, Doug plans to put in a small feedlot for livestock to ensure he has flexibility in the system to feed livestock efficiently.

"Work on the market price for water... if you can't make as much out of your annual crops as you can from selling your water, then you are creating work for yourself"

If you could make one recommendation about how to successfully navigate changing water markets and variable climate what would it be?

"There will always be variability in water price and availability. An infrastructure plan for your whole of farm is valuable for the longer term. Farming relies on a lot of variables which can change quickly, so you have to be adaptive in your crop choice and water use. Try to be flexible, have a plan, which is reviewed regularly. Be flexible year to year, understand water markets, when water is there and cost effective, then you need to be set up to utilise it fully".

"Finally, maintain your infrastructure and try to minimise your infrastructure per hectare costs. Capitalise in the good years and reduce your costs in the dry years".



"You have to be prepared to take full advantage of your assets when conditions change"

Further Information

[Plan2Farm – Irrigated Cropping Council](#)
[Agriculture | North Central Catchment Management Authority](#)
nccma.vic.gov.au

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