

# COOL SOILS INITIATIVE – CASE STUDY, BOWEYA

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## **Describe your farming enterprise**

Our enterprise is approximately 75% continuously cropped, broadacre crops consisting of canola, wheat, pulses and oats. The remaining 25% is a prime lamb breeding enterprise and bought-in prime lambs to a finishing operation if the season dictates.

## **Describe your cropping sequence/rotation**

Canola, wheat, wheat, canola, wheat, pulse

## **If there are any pulses, what are they and what are your perceived and real benefits (quantified) from including a pulse?**

We grow peas as a break crop to assist in weed management and also to fix nitrogen. Crops that follow the year after, have increased harvested yields by up to 0.5 tonnes to the hectare

## **If there are any pastures used, what is the composition of the pasture, and how long does your pasture phase go for?**

Our pastures are long-term (not suitable for broadacre crop) paddocks which consist of ryegrass and sub, balansa and white clovers. In some years we direct sow in an oat or grazing wheat for a winter feed wedge.

## **What range in soil carbon values do you have across your property (0-10cm)? How have these changed in recent years?**

Our soil carbon values range from 1.1% through to 3.3%. In the past, when we were bringing in pasture paddocks into cropping phases, the soil carbon values were at the higher end of the range but continual cropping has seen them around the 1.5% mark. These historical records are most likely not valid as soil tests were not GPS located and repeated exactly in the same spot in subsequent years.

## **What value do you place on maintaining/improving soil carbon in your cropping system?**

We value maintaining and improving soil carbon in our cropping system as it is important for boosting yields, keeping the soil healthy, increasing soil fertility levels and encouraging the flora and microbial actions in the soil.

## **Are you likely to change your management practices to attempt to improve soil carbon (if not unprofitable)**

Yes, we would change management practices to improve soil carbon if it were practical and cost effective and not cost prohibitive.

**What benefit do you see this project (CSI) having to your enterprise?**

This project keeps us informed and engaged about how we can increase our production whilst staying sustainable. It also allows us to converse with other growers whilst taking on an understanding of how livestock/ broadacre mixed farms contribute to greenhouse gas emissions.

**Have you trialled any new ideas or approaches regarding plant systems, rotations, novel**

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At present we have not trialled any new ideas or approaches.

**Have you changed any practices to reduce your greenhouse gas emissions?**

Not all of our crop paddocks are burned now. If we think that we can get the seeder through we will leave stubbles to encourage soil health and microbial action.

