

TED LANGLEY ZERO-TILL TEN YEARS ON

“Soil is like using a pile of timber to build a house – we need to construct it in such a way that we make spaces inside for things to thrive in”



Ted Langley is a landholder from the Upper South East, where he runs his family property with wife Cathy and brother Bill.

The Langleys grow beans, canola and wheat in a zero-till system, along with a prime lamb and wool production business. They are continuous learners and “things are always up for review” in the enterprise. The family looks far and wide for learning opportunities, knowing this will shape what they do.

Ted believes in three pillars of conservation farming: cover, rotation and the absence of tillage. He isn't just a believer though - he lives by this in his every day family farming practice in the Upper South East of South Australia. Regenerating the soil with the aid of zero till was the initial aim for Ted, wife Cathy, and brother Bill when they set about trialling zero-till ten years ago. They crop around 75% of their 3,350 hectare property, with prime lamb and wool production making up 25% of the farm business.

The Langley family has been farming in the region since the 1880's but much has changed in that time. Ted is a self-proclaimed “soil caretaker” and he cannot stress enough the importance of looking after the very thing that affects 100% of his business every year.

When they moved to a largely crop based enterprise they ran a traditional intensive cropping enterprise. But after sowing annual pasture after a cereal crop, leaving it for a few years, then going back into a cropping phase, they realised they were only getting up to three years before the soil was denigrated and had to be put back to pasture. With no stubble and dry years, erosion was also becoming a big problem.

Ted reflects saying “The soil couldn't handle our methods, we'd burn, work up with summer rain, work back, harrow etc. Possibly the light bulb moment was finishing a paddock just as the rain came. On a good clay loam, the top cultivated soil above the plough pan turned to soup with erosion on the slopes – it was just a mess. This was widely accepted as “just bad luck” but it was abusing the very thing we depended on. There had to be more to it than just good or bad luck.”



PROPERTY INFORMATION

Producers Ted, Cathy and Bill Langley

Location Bordertown, South Australia

Property Area 3,350 hectares

Enterprise Cropping, Prime Lamb and Wool Production

Rainfall 480mm

There has to be a better way...

Zero-till or no-till farming mimics the natural conditions under which most soils are formed more closely than any other type of farming. The soil is left largely undisturbed, except when seeding takes place.

The progression to zero-till didn't happen overnight! The start of the process was a tentative one, progressively trialling methods that reduced soil disturbance and increased stubble retention.

The Langleys have seen many benefits of zero-till including increased water infiltration into the soil, increased organic matter retention and cycling of nutrients in the soil. Zero-till also significantly reduces erosion, keeping the top soil in place. Fewer disturbances also leaves root channels in the soil. Ted points out the advantages of this including "not only more worms, but better root penetration for the next crop providing a good opportunity for crop establishment and access to soil nutrients and moisture." All of this leads to improved soil structure, which leads to better production.

With increased infiltration of water into the soil and the ability to store this increase, the Langleys can now continuously crop, turning a profit on each crop. Traditionally break-crops were not income driven, but part of a rotation to rest the soil. Ted has trialled sunflowers as one break-crop but currently runs a rotation of beans, canola and wheat, although this is consistently under review.

Along the way the family has worked hard at increasing their knowledge and ways of thinking – joining zero-till associations, reading, conversing over social web-based platforms – always learning. Ted says "It's a world of learning now, we follow people on Twitter half way across the globe and we can adapt what they learn locally."

Everything is always under review in the Langley enterprise. They experiment with row width for each type of crop. Recently they have trialled narrow disc seeding, finding the optimum light interception for the crop, whilst maintaining yield. This showed a lot of promise with canopy closure occurring much sooner than on wider rows, which Ted feels improves weed control.

Ted even admits "we like to change things as we go". He has been called a living showcase, and it seems that people who are willing to explore change will inherently be resilient, an important quality in farming.

The hard work is paying off for the Langley family. They have recorded increasing wheat yields despite tough seasons, and yields have also become more consistent, a trend that is not easy to come by in this industry.

Zero-till has an increasing number of landholders seeing benefits in these methods. However there are still landholders who choose to maintain traditional methods and don't always understand the Langley journey, but as the family say "It's not for them is it...". The Langleys continue to look wide for knowledge and support saying, "We can learn from what others are doing right across the world these days – the audience and the opportunities are big! That's what keeps us going."

BENEFITS OF ZERO TILL FOR SOIL INCLUDE:

- Increase water infiltration to the soil
- Greater soil moisture retention
- Increased organic matter retention
- Better nutrient cycling
- Greater root penetration
- More worms
- Less erosion



CONTACT

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"Our actions today are not isolated – they will affect how things respond into the future – what we do today will affect us for at least the next five to ten years"- Ted Langley