

ctf PROFILES

Case Study 4



Producer: David Greig
Location: Tottenham, NSW
Soil type: Red, clay loam
Average annual rainfall (mm): 450
Growing season rainfall (mm): 250 on average



Current farming enterprises

David's enterprise consists of 40% winter cropping and 60% sheep. Wheat and canola are grown for cash crops and oats and lupins are grown for grazing and fodder.

When did you commence CTF and why?

The Grieg's commenced CTF in 2008, having used minimum till practices since 2001. The decision was made after coming out of two particularly dry years, David had noticed at several field days he'd attended during that period that CTF crops with good fallows were performing better than traditional crops. As they were looking to expand their acreage they decided to go down the CTF path for better efficiency, and as their airseeder was already CTF capable only the purchase of a new tractor was necessary to get started.

Were there any issues that you encountered with the conversion to CTF?

There were no glaring issues to converting to CTF, though David was conscious of not spending too much on machinery and looked for suitable second-hand machinery where available. He stated that the biggest obstacle was "in his head" and the challenge of changing his mindset.

Although starting CTF was easier than he thought, an early hurdle he encountered was teaching staff and contractors to stay on the tramlines.

He said people often didn't understand what he was trying to achieve, an example being a windrowing contractor with less accurate GPS often straying off the tramlines unless constantly monitored.

Has your farming system changed since converting to CTF?

David recently changed from a tyne to disc seeder to allow better stubble handling. The change came after heavy stubble loads in 2011 created trash clearance problems with his tynd seeder forcing him to burn large areas of stubble.

It was very noticeable in following crops how uneven the yields had become due to water run-off.

This effect was observed for some years after burning and reinforced David's experience of retained stubble reducing run-off and providing better water infiltration.

David's cropping rotations are fairly fluid, depending on gross margins for any enterprise. Before converting to CTF his rotations generally were wheat/wheat/chickpeas or lupins but he no longer grows wheat on wheat and has added canola to the rotation. A typical rotation is now

wheat/canola/wheat /lupins. He has found lupins as a break crop produces the best wheat crop the following year.

Describe your machinery set-up and any changes you had to make to convert to CTF.

David's machinery operates on 3 m centres and his seeder is 12 m. His spray rig (a re-purposed cotton picker) is 36 m wide and his two headers have 12 m fronts. His GPS is accurate to 2 cm.

Describe any changes you have seen in terms of fuel costs and work rate.

The biggest change for David was changing from a tynd to disc airseeder, this alone halved his fuel usage during sowing. He believes CTF is also providing further savings in fuel with firm tracks providing better roll, he said if his spray rig drops off the tramline it will reduce speed by 1 km/hr.

He is now able to get on to his country much more quickly to spray and with less mess, particularly in wet conditions. Headers are also much less likely to bog at harvest if the soil is wet although if leaving the tramlines, for example when turning bogging can be an issue.

Describe any impacts CTF has had on soil characteristics.

David said it is obvious his soils have become much softer, to the degree that what he once described as 'hard setting red soils' are no longer hard setting at all. One particular paddock that was quite gravelly and very hard when he purchased that country is now developing cracks like self-mulching soil and is now very friable. Water infiltration has been much improved resulting in much more even crops.

David is aware that tram tracks will need renovating periodically, at this stage around ten years. He'll use the opportunity to level paddocks that need it, apply lime if necessary and utilise weed control strategies on problem weeds like windmill grass. He'll also consider using wheel track renovators in paddocks that are otherwise in good condition.

Interestingly he has noticed that paddocks that were no-till farmed before CTF are standing up better than newer paddocks. Tramlines in new paddocks have either sunk or the soil has fluffed up around them – David is unsure of which.

How has CTF impacted weed control and the weed spectrum encountered?

An early observation was when a contract sprayer on a neighbour's property commented on how little dust was being raised on David's CTF paddock in comparison to the conventional paddock he was spraying. This is creating better weed control in wheel tracks than was previously possible before CTF.

Timeliness of spraying is also improved as he can get onto paddocks much quicker under wet conditions.

Fleabane has become an increasing issue but David feels this more to do with no-till practices rather than CTF. There are also patches of windmill grass and he is currently playing with different chemical mixes for control. He will also use periodic paddock levelling to cultivate windmill grass if needed but is inclined to tackle small areas rather than a general tillage. Because his farming area has increased in recent years he is more reliant on chemical control of weeds than cultivation and would find it difficult to till large areas with any timeliness. He would prefer to not use contractors unless absolutely necessary.

How has CTF changed your weed control practices?

David maintains his weed control practice hasn't much changed since converting to CTF, but rather it has cemented his current program of reduced tillage.

Do you have any weed resistance issues?

David hasn't observed any resistance forming as yet but is closely monitoring his paddocks.

Double-knocks are commonly used on problem weeds such as fleabane. Are you using this tactic?

Although having to use a double-knock spray on fleabane in early 2017 due largely to the very wet spring

experienced in 2016, David prefers to use a high rate of an amine/ glyphosate mix when the weeds are small and avoid a second spray.

Describe the impact CTF has on your crop yields.

Although some above average seasons have seen a general increase in yield across the district, David has noticed much more consistency across all soil types and crop types since switching to CTF. He is now much more confident in predicting crop yields based on available stored moisture and also more confident with new crop varieties.

He gives an example of a paddock that slopes upwards to a hill; in the past the hill area would consistently yield 1 tonne/ha (1000kg/ha) less than the lower section of the paddock, but since switching to CTF nine years ago in that particular paddock the yield drop off is now only 2-300 kg/ha.

Are there any issues that producers considering adopting CTF should be mindful of?

David stresses that although people may think the biggest hurdle to overcome is changing machinery the truth is it's more a struggle to change your mindset.

When you are upgrading equipment, decide on what width you want to work at and target machinery based on that. Don't try and do it all in one year, give yourself four or five years and focus on getting the basics right.

Once you've started the soils start to respond quite quickly and that gives you confidence to progress further with each new crop.

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