Controlled Traffic Pays off

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In 1995 after we had trialed a paddock in a basic controlled traffic regime, it struck us as to why we hadn't thought of this sooner.

My parents, my wife and myself operate a grain growing property north of Clermont in Central Queensland. It was originally brigalow scrub country and is characterised by soft black soil and being relatively level, although approximately half the place is contoured. Coupled together with long gradual slopes (often 1km+) and a summer storm rainfall pattern, we find we can often stretch the friendship between contour banks and runoff water.

Before moving into controlled traffic farming, we generally farmed on the contour and around the paddock. We were gradually increasing chemical weed control but were still putting a lot of hours on tractors. In regards to equipment, we were using two 4WD tractors and due to probably more good luck than anything, most of our tillage equipment was somewhere near 40ft wide. The only real change we made was from a 60ft to an 80ft boomspray.

I would like to spend a moment on some of the points that lured us into controlled traffic farming.

- *Spray Guidance* - Trying to figure out where you had been and conversely where you were going next was a constant aggravation. The life span of foam blobs in a Central Queensland summer is about the same as snowflakes in hell and equally as useful. The best you could do was to pick a row of crop or stubble that you liked the look of and follow it. That was fine until you looked behind because when you looked back all rows looked the same.

  For Controlled Traffic, we pulled a row out of each tractor wheel track in winter and closed up the middle pair of rows on the summer crop planter and now we almost treat spraying as rest time.

  This last summer we sprayed almost entirely at night and found we were getting much better results.

- *Reduced wheel track emergence* - There are two parts to this. For years we have been using different points and digging tynes deeper in order to improve emergence behind the tractor. It never occurred to us to just stop trying and don't plant there. The other half of the problem was that after planting, the prior spray wheel tracks were still with us because nothing germinated in the depressed wheel tracks.

  These last two points tie together somewhat. By keeping everything on track we now eliminate the guidance problem and missed strips. As well as keeping all wheel tracks common we don't have any extras heading somewhere else.

- *Erosion rills between contour banks* - Just before the first Controlled Traffic farming conference in 1995, I had the pleasure of harvesting some of our wheat which yielded about a bag per acre. My high speed operation became quite difficult in the contoured country as I bounced from one wash to the next. At the time I was wondering how effective these contour banks were as there were a multitude of rills coming across the contour bay before spreading out in a silt fan in the bottom of the contour. It looked to me as if we were still doing a pretty good job of moving dirt downhill!

  After returning from that first conference we decided to turn some workings down the hill and across the contour banks. We had to reshape some of our banks a little but the difference has been amazing. Now when water starts to runoff, it simply leaves the soil behind.

- *Overlap or a lack of it* - This is probably one of the most important aspects of controlled traffic farming. We fitted our planters with marker arms and now look all day at a line extending out from the tractor bonnet instead of peering over at the last worked edge. In one paddock that we used to work as separate contour bays, we now work up and down and an effective 18% less area. That figure is also what we save on fuel, seed, chemical etc. What you pick up however is the yield on the part of the crop that would normally be double planted and suffering because of that. The Queensland DPI state that average overlap is approximately 7%. A 7% reduction in costs across the board adds up to some real dollars.

The points just mentioned were what got us initially interested in controlled traffic. As the system evolves, constant adjustments are being made. Our 12 metre wide, 2m wheel centres and 1m row crop systems work perfectly until you want to bring the header into the system. This has become our next challenge. The point was recently hammered home when we wanted to plant sorghum immediately behind the header harvesting corn. The header wheel tracks were just simply in the wrong places. It meant that 2 rows out of 11 or 18% of plants were going to have a fairly unhappy life.

As a solution we have decided to return to a 30ft header front and extend everything to fit a 3 metre wheelbase. Our header is the most indivisible article and since it is relatively easy to change the other equipment, we will do just that. We currently have front wheel assist tractors and a spra-coupe, all of which we can adapt to a 3 metre wheelbase to follow the header.

In the near future we have plans to make possible some alternative operations such as sidedressing fertiliser on all crops including wheat and to do some more work on long slope management by using furrowing techniques similar to the flood irrigation industry.

As our system has evolved, possibilities are always emerging which previously seemed unfeasible. I look forward to the time ahead when we will start to see some of the current new technologies mature, especially in the areas of spray application and guidance.