

CASE STUDY

Col de Grussa



Col de Grussa farms at Gibson, 20km north of Esperance running a continuous cropping program.

He farms in an area that can easily become too wet leading to weed blowouts, so he has added a harvest weed seed control option to stay on top of weeds.

Colin has used chaff tramlining for a number of years, and has found that using it with a fully matched controlled traffic system is paramount to achieving success. For his controlled traffic farming plan, Colin uses a 36m sprayer, a 12m header and a 12m seeding rig. All of his wheel tracks are the same every year, and although the machinery widths fit into a CTF system, the wheel tracks of the seeding machine don't match with his header. He originally had a chaff lining set up on his previous header, and then swapped machines just before harvest. Due to time constraints, he did not re-install a chaff line kit on that machine. Col then had a few years where he did not use chaff tramlining at harvest, before coming back to it on his current harvester. His specific set up differs to others; although he places the chaff residue in the wheel tracks, he uses a chute design rather than conveyor belts to achieve this.

Originally, Colin had a John Deere 9750 STS harvester which did not separate the chaff and straw before being spread onto the paddock. In order to use chaff tramlining, Colin had to install a baffle in the back of the harvester, which he said required 'a lot of stuffing around'. The baffle they installed impeded airflow through the cleaning sieves, and required modifying to regain sieving capacity. The solution they came up with was to put holes in the baffle to allow air to move through it. However, this would have reduced the efficacy of weed seed capture as weed seeds could also travel through these holes. Despite this Colin estimated that it was still capturing about 80% of the weed seeds.

After dividing the chaff and straw, Colin used a metal frame with rubber panels to direct the chaff into a single row. He then switched machines to a Massey Ferguson 9540, which delivers chaff and straw to the spreaders separately. With this machine Col found it much easier to use chaff tramlining. His strategy was to put rubber around the chaff spinners and then direct it into the wheel tracks of the sprayer, which worked well with his CTF system.

As far as ongoing hassles with his system, Colin said that the rubber deflectors inherently catch a lot of air, so when the machine is running and stationary he said that the chaff can get blown around a fair bit. Aside from that, it was just getting all of the machinery onto the right run lines.

Since using chaff tramlining, Colin says that he has not really seen a decrease in weed numbers, but more a change in distribution. He thought that a few more years of chaff tramlining would be needed to really change the distribution of weed seeds into the chaff tramlines, and to get the numbers down. When asked to ponder the effect of a wet or dry summer, he said that he usually gets a wet summer and so couldn't comment about the difference. "I'm not sure about rotting over summer, but it will germinate. Normally we get multiple germinations over summer, and those chaff tramlines will germinate, and you can spray them out, or you can get some hot weather and they die anyway. I think the rows hold the moisture better, because it's like a mulch. It's definitely useful, because I think we get a better germination in the chaff lines than if the seeds were just cast across the paddock. On our non-wetting sands, the seeds can sit there a while."

When asked if it had saved him a spray application, he said 'not yet.' 'It is a part of the whole tool box. You don't do this to stop doing something else. I think if you're combining everything you have a better chance of getting on top of (the weeds). It's just another thing that you are doing in addition to whatever else.'

More so, his motivation for chaff tramlining is for the future. 'In the long term we are better off. I think we will never be able to move way from using herbicides, it just means that they will last longer.'



In terms of cost, Colin said that the chaff tramlining kit itself only cost a few hundred dollars, but as he sees fully repeatable controlled traffic as paramount to the success of the operation, that would be an added cost to consider if growers were not already moving toward that. Further, he said that ideally growers would move toward a boom spray with only selected nozzles turned on, and concentrating a spray onto only that part of the paddock.

"We probably need a few more years of it I think, and to do something more with the weeds we are collecting. Like anything, it is a numbers game, and it will take us a while to get the numbers down."