

CASE STUDY

Carl Rasic + Henry Barlow

Carl Rasic farms at Scadden and Cascades, North and NW of Esperance. Their 100% cropping business operates on a detailed, fully matched CTF system, which is complemented by the use of chaff decks. The motivation for getting involved was part of a long term strategy for managing weeds.



Herbicide resistance was appearing, and the logic was that it would be easier to control weeds if you know where they are. They had previously burned narrow windrows in the past, but wanted to preserve as much stubble as possible. To them, the logistics of being able to safely burn windrows without having the fire escape and burn the stubble meant that it would not be looked at. Chaff carts were also considered and rejected as it seemed that casual staff driving harvesters would have been risky to the machinery, as well as trying to contain burning chaff piles in autumn. A single narrow chaff line was excluded as it was thought that using their tined seeding machine and interrow seeding would have been too much of a hassle, and that the resulting disturbance of the chaff line would lead to more germination of weeds.

Carl originally started using chaff decks in 2009, after borrowing the principle from Colin Hutchinson of Mount Madden. The design Carl used was different to what he saw in practice at Colin Hutchinson's farm, but the end result is the same. Carl uses a design similar to the commercially available EMAR chaff decks, with 2 diagonal conveyor belts to catch material coming off the sieve and direct it into the wheel tracks. Originally, the conveyors were uncovered, but they have since shielded them to prevent wind disturbing the chaff and carrying it away.

Carl uses a 1:2:3 compromised CTF system, with a 13.6m harvester front, 27.2m seeding bar and 40.8m sprayer, all on 3.2m centres. As his CTF system is fully matched and fully repeatable, he has modified his seeding bar to accommodate the chaff lines. Originally, Carl operated with the tines that align with the chaff lines removed. However, they decided that skipping a seeding row forfeited too much area of the program and let too much sunlight through the canopy to encourage weed growth. The system then evolved to use 2 disc seeding modules that run either side of the chaff tramline, and also adjusted the spacing of the crop rows so that the chaff tramlines are not disturbed. This leaves the chaff less prone to disturbance, reducing weed germination, and also means that the crop germinating in those rows is not on the wheel tracks.



On account of their fully matched CTF system, they are able to use their seeding set up to complement their chaff tramlines and to reduce the germination of weeds in the chaff row.

IMAGE: Carl made his own chaff decks, with a similar design to the current EMAR deck.

**IMAGES:**

L-Disc modules are set up to straddle the chaff line and leave it as undisturbed as possible.

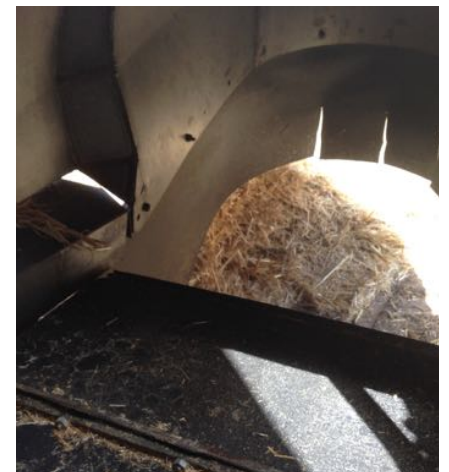
R-If the need arises, they have a small boom they can use to spray just the wheel tracks.

In terms of performance, they are happy with how effective the chaff tramlines are. On account of the wetter than average year, there had been a blowout of ryegrass in the trams according to an employee, Henry Barlow, with the ryegrass tillers pushing through the rest of the crop. This illustrated that the system was working to confine weeds to narrow rows. On account of the CTF system, the repetitive traffic was working to breakdown the weed seeds.

"Because you are putting 45ft widths into two spaces that are each 600mm wide, they out compete each other a lot. With our first summer rain, you get a bit of germination. They out compete each other so starve each other a bit, and then you spray them and knock them all. You see after a couple of years of good build up a lot more rot away. The first year they get compacted back into the soil a bit, and it's just getting that rotting action. You are quite reliant on summer rain as well to get it to work to get that rotting action."

It has also had other, smaller benefits for being able to manage weeds on the farm. After a summer with no rainfall, he experienced a lot of volunteer wheat coming up in his barley. In order to preserve purity of the seed, he was able to accurately remove the wheat by spraying only the tramlines. Had he not been using chaff tramlining, the volunteer wheat would have been evenly spread through the paddock, and therefore not been able to be managed.

As for future aspirations, Henry said that they were quite happy with their current system. Although they are attracted to the idea of the iHSD and think it is a great idea, Henry said "the chaff decks are a lot cheaper. Ray (Harrington) has a great design, but it's just a bit cost prohibitive at the moment."

**IMAGES:**

(1) The shroud for the deck. (2) The tractor mounted boom, for spraying chaff lines. (3) Inside the deck, looking at the exit.