

# CASE STUDY

## Mick Shutz

Mick's farm ranges from Grass Patch to Salmon Gums, between 70 and 100kms north of Esperance. He uses chaff decks to place weed seed bearing chaff on permanent tramlines for his harvest weed seed control.

Although he did not have a serious problem with weeds in his cropping program, he was aware of the problems they could cause. For this reason he adopted a system that could be applied to his program with little fuss.



Having been chaff tramlining for 6 years, he said his motivation for using the system has changed, since realising the added benefit of dust suppression during summer spraying. Further, as he is on a fully matched 3:1 controlled traffic system a chaff cart posed another logistical issue. Over summer the chaff piles would be present on the tramlines, including the high traffic ones, meaning he would need to drive around them, defeating the purpose of a CTF system. Further, burning chaff piles at the beginning of each season is inherently problematic. Compounded by the variable weather in Esperance, of cool and damp nights followed by hot windy days, burning in a controlled manner is difficult.

"We never really contemplated going for a chaff cart. They were not even looked at. They slow the header down as well." Another added benefit Mick had noticed was being able to better control volunteer wheat in barley and barley in wheat.

"They are on pretty hostile tramlines and tend to only get small heads on them." This has since reduced the need to control the volunteers though chemical means.

With regards to the efficacy of controlling weeds, Mick says that the decks 'definitely work.' The whole idea of his CTF system was to make the tramlines the weedy parts of the paddock, and it is even more effective having the chaff placed there also. He said lots of the ryegrass seed that is placed there tends not to germinate, based on gut feel about how much goes into the chaff tramline and how many germinate. Further, the survivors then tend not to be vigorous. He puts it down to the constant wheel damage and soil compaction that they cannot compete with the crop.

*The additive benefit of controlling volunteers, managing weeds and reducing dust during spraying means the chaff deck is a great option for Mick.*





**IMAGES (L-R)** (1) Mick's chaff deck. (2) The belt running across the back of the machine, showing the cover between the left and right side belt. (3) The baffle/dividing plate to separate the chaff from the straw. Note the 'bull nose', designed to minimise stems lodging on the leading edge.

For summer spraying in his operation Mick said that he will often put 2-3 knockdowns over his paddocks before April. For his first application he will use a blanket spray and follow it with a detector spray to take out any survivors. However, as detector sprays have a poor ability to detect 1-2 leaf grasses, and as most of his grass weeds (volunteer cereals and rye grass) having his grass weeds mostly concentrated in his wheel tracks, he has nozzles over his wheel tracks permanently on to kill any weeds present.

This system works well, as the weeds across the rest of the paddock tend to be fleabane in various stages of maturity, at a density that it is cost effective to use a detector spray. When designing his decks, he was able to keep it cheap and simple. Mick runs John Deere S series harvesters, with chaff decks he designed and built himself. The baffle (to divide the chaff from the straw before it is placed onto the decks) is made from a single plate, and only moves the straw chopper 100mm back from its normal working position.



**IMAGES (L-R)** (1) Looking up the shroud at the end of the deck. (2) Designed with ease of access in mind, all electrics have plugs so the deck can be easily removed. (3) Speed sensor on the conveyor belt.

One of the common commercially available decks requires the chopper to be moved back approximately 700mm from the back of the sieve, which Mick said can interrupt airflow and thus the cleaning capacity of the header.

Also, his deck is quite simple to remove if need be, with quick release couplings on all hydraulic lines, plugs for the speed sensors and only 4 bolts holding the whole thing on. With all of this, it is able to be removed in about 15 minutes. Given the deck needs to be removed to access the sieves, it is a necessity.



*Weeds germinate more densely in the chaff line, leaving more of the paddock clean.*

As for the future, Mick said he would be looking at integrated mills 'with interest.' As the mills deal with the seeds so they are 'out of sight, out of mind' it would go a long way to prevent germinations of seeds and further reduce the seedbank. But, for the time being, Mick was happy with the chaff decks as a tool.

"It's not the ultimate for controlling weeds, but it's about being one step ahead."

**UPDATE:**

Since speaking to Mick during harvest of 2016, he had purchased 3 integrated seed destructing mills for his machines and used them for the 2017 harvest.