

Michael & Kezia Metcalf

Michael calls the shots, not the weeds.

Owners:	Michael & Kezia Metcalf
Location:	Dowerin, Western Australia
Farm Size:	3850ha, 80% crop, 20% sheep
Annual average rainfall:	325mm
Soil types:	duplex gravel
Crop program (2017):	wheat 2000, barley 700, canola 400
Typical Rotation:	varies depending on paddock and weed burden

A combination of harvest weed seed control (HWSC) strategies is working for Michael Metcalf who farms north of Dowerin in the WA Wheatbelt.



The chaff cart towed behind the Metcalf's header

As the area sown to crop increased across the farm in recent years, weed control became a high priority and HWSC became an important part of the enterprise. Being a mixed enterprise, the attraction to a chaff cart was partly due to the quality of chaff dumps for livestock feed over the summer period.

Michael invested in a chaff cart four years ago and tows this behind the header in cereal crops. The canola is narrow windrowed and burnt. He says that the best weed seed capture happens early during harvest before weeds have a chance to shed. Attaching the chaff cart takes approximately three hours and is relatively simple for an experienced header operator to tow.

Michael has gone to lengths to fit cameras to the back of the header and cart to ensure that any issues are quickly noticed.

He has also made some modifications to the chaff cart elevator to ensure that just the chaff is captured and the straw is deflected and spread evenly to prevent straw dropping and not spreading evenly across the header cut. However, harvesting lower yielding crops where it's not as easy to capture weed seed is a challenge.

To maximise weed capture through the header front, they cut as low to the ground as possible, although they need to be mindful of rocks. On the previous header they had extendable fingers, and while they aren't fitted to the current header, it is something that will be considered in a poor season.

Harvesting speed is reduced because the capacity required to tow the chaff cart but Michael has commented that slowing down allows a much better cut of both weed seeds and crop. In lighter years, losses off the knife can be much greater as there is not the bulk of crop to get a clean cut and harvesting is done at a faster speed to prevent losses over the sieves.



IMAGES: The chaff cart set-up



Michael feels that weed seed is lost over the front of the knife in this situation when harvest speed is up. HWSC is not the only part of the weed management strategy on this farm.

Crop competition is Michael's greatest ally. He stresses the importance of getting a healthy crop up and going. This helps hold weed seeds up and makes it easy for them to be captured at harvest. Previously the Metcalf's were on 12 inch row spacing, but have moved back to 10 inch to improve competition. Variety selection, including growing competitive varieties on consecutive cereals (eg. Scope barley) is also important, as is rotating and utilising different herbicide groups.



Low harvest height is essential

In Michael's opinion HWSC is not a silver bullet on its own. However, as part of a wider strategy on weeds, there has been a distinct decrease in the weed burden across the farm. Michael says the chaff cart is excellent on radish and also reasonably good at ryegrass and brome grass. Weed burdens are not getting any worse and the farm is maintaining a low weed burden. It gives him the confidence to sow earlier than they have done previously.

This is where Michael feels that he can really have a win as a result of staying on top of the weed seed bank. Michael calls the shots, not the weeds, and he can take advantage of early sowing opportunities without the need to wait for a weed germination prior to seeding. "Even if a storm has gone through, you will lose weed seed but it (HWSC) is still worth doing." The long-term outlook for HWSC at the Metcalf's is that they will keep doing it.

Consideration of HWSC options that don't involve burning have a distinct advantage and would work in a system with livestock. Being able to finish harvesting and not require any further paddock preparation is definitely attractive. HWSC is an integral tool in the Metcalf's efforts to keep weed numbers low and provide flexibility with their cropping and livestock enterprise.



The header front set up for harvest