

A tank mix for better ryegrass control

Tank mixing pre-emergent herbicides is proving to be the most effective way for farmers to manage herbicide resistance, following a series of trials and other investigations in recent years.

Mixing herbicides is better than rotating them and can double their longevity, according to Dr Roberto Busi from the Australian Herbicide Resistance Initiative (AHRI).

This is also a key recommendation to come out of field research led by Dr Chris Preston and his colleagues at the University of Adelaide as part of the WeedSmart program funded by GRDC. (See Graph 1).

“In recent years, we have done a lot of work to understand how to get the best out of pre-emergent herbicides for managing herbicide-resistant weeds such as annual ryegrass and wild oats,” Chris said.

“This included six trials done in collaboration with farming systems groups in southern NSW, Victoria and South Australia in 2012 where we compared the performance of Triflur X®, Avadex® Xtra, Boxer Gold® and Sakura® alone for reducing annual ryegrass spikes.

“When we used Avadex Xtra in tank mixtures with Triflur X, Boxer Gold or Sakura, the ryegrass control from all treatments improved significantly.”

Chris said adding Avadex Xtra to Triflur X was an ideal tank mix for lower rainfall environments for extra control of ryegrass and wild oats, provided there was no trifluralin resistance.

“Avadex Xtra and Boxer Gold also improved ryegrass control, but the stand-out performer was Avadex Xtra and Sakura,” he said.

“In higher rainfall areas with wheat yields of 4 t/ha and more, our work showed Avadex Xtra and Sakura is the starting point for ryegrass and wild oats control.”

Field trials by Nufarm in 2017 and 2018 have consistently confirmed the value of tank mixing Avadex Xtra with other pre-emergent herbicides, even in a dry year.

Andre Sabeeney, Technical Marketing Lead with Nufarm, said the company’s trials such as one conducted in southern NSW last year produced similar findings to those led by Dr Chris Preston in 2012. (See Graph 2).

“The other key finding from our research was how important it is to use a mix partner like Avadex Xtra when conditions at sowing are variable, such as the dry start in 2018,” he said.

Andre added that it is no longer good practice to rely on a single pre-emergent, and it is also wise to understand the different properties of the herbicides used.

“Avadex Xtra and trifluralin are slightly volatile and once incorporated, this is beneficial when rainfall is marginal,” he said.

“This is because the vapour activity fills the air pockets in the soil and allows some uptake via the roots and shoots. These two herbicides don’t just rely on moisture to have an effect.

“When Avadex Xtra is added to Triflur X or Sakura, we see better and more consistent control of annual ryegrass than using any of these herbicides on their own.

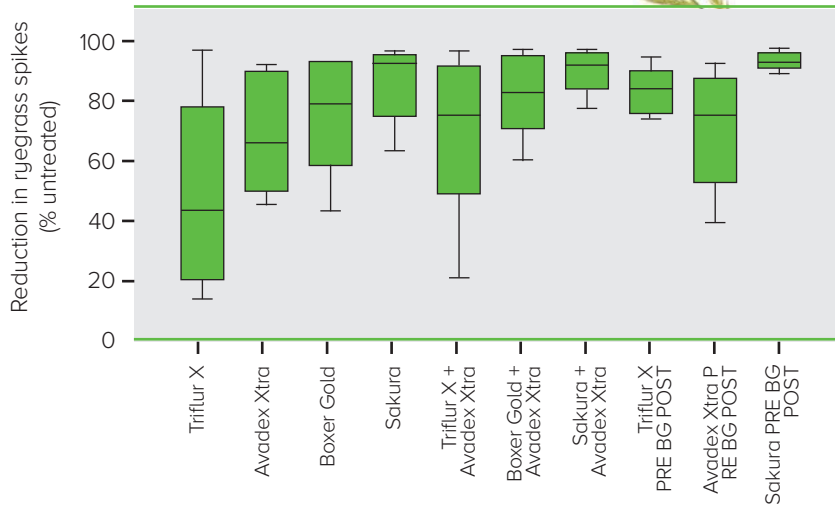
“Our R&D work with higher rates has enabled Nufarm to obtain a unique registration which gives increased control and longer residual activity too.”

Andre issued a timely reminder to agronomists and farmers about rotating the chemistry they choose.

He recommended rotating between Group D herbicides, trifluralin or propyzamide, and Group J and K herbicides, Sakura, Boxer Gold and Avadex Xtra (see Figure 1).

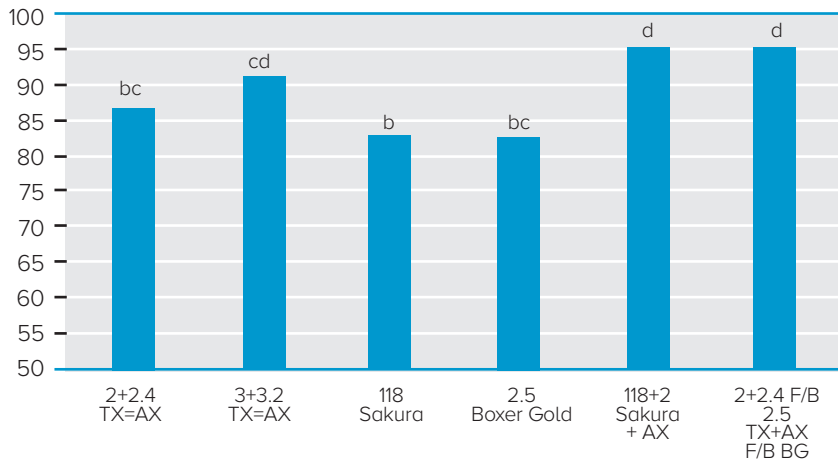


Dr Chris Preston from the University of Adelaide has led a lot of work to understand how to get the best out of pre-emergent herbicides for managing herbicide-resistant weeds such as annual ryegrass and wild oats



Graph 1: Research led by Dr Chris Preston found that tank mixing Avadex Xtra with other pre-emergent herbicides produced better ryegrass control than using any of those herbicides on their own.

The addition of Avadex to other pre-ems increases control and consistency



Graph 2: This trial in southern NSW last year showed better and more consistent control of annual ryegrass when Avadex Xtra (AX) is added to Triflur X (TX) or Sakura.

Mix, rotate and double knock between different coloured boxes

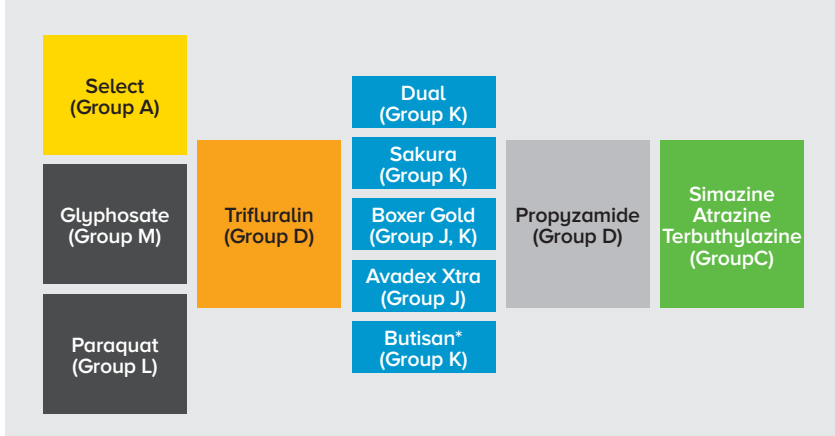


Figure 1: Agronomists and farmers should rotate the chemistry they choose to increase the longevity of their pre-emergent herbicides.