

# Management key to future weed control

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Growers have no option but to get better at weed control management, cautions University of Adelaide lecturer Chris Preston.

“Internationally, there is nothing in the pipeline that will be a useful post-emergence grass herbicide for Australian conditions,” he said.

“This means we have only the current range of pre-emergent herbicides available, so we have to manage them better and get more from them.”

‘Doing better’ in this context means paying close attention to detail in all aspects of weed control and placing a higher priority on management options to reduce and keep weed numbers down so other tactics, including chemicals, work better, Dr Preston said.

“Detailed knowledge of the characteristics of the products available is critical to achieving the best results from them but we are also looking for ways to enhance their effectiveness. Mixtures appear to be one of the few options available.

“The addition of Avadex appears to improve the effectiveness of many of our current pre-emergents.

“Sakura plus Avadex is a high-cost option, about \$60/ha, but could be worth it for a grower who wants to hit ryegrass hard to reduce weed numbers to enable better control with other methods. This mixture has achieved 89% ryegrass control in trials, so it is a tool that could be used to get problem populations down to manageable levels.

“A combination of Sakura and Avadex will also provide about 75% control of brome grass but, as with ryegrass, the cost means it is likely to be used only as a one off tool to reduce problem populations to manageable levels.

“This points to a clear need for other management tools that can be used against brome grass and the next challenge is to find an effective method of eliminating or inhibiting seed set.

“For clethodim-resistant ryegrass in canola, the best option available is a combination of pre-emergent herbicides containing clethodim plus Factor, a Group A herbicide.”



CHRIS PRESTON SAYS GROWERS WILL HAVE TO GET BETTER AT WEED CONTROL MANAGEMENT AND LEARN HOW TO GET MORE OUT OF CURRENT PRE-EMERGENT HERBICIDES.

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He sees scope for cultural management to improve weed control and the efficacy of the available chemicals.

“Pre-emergents and crop competition were made for each other. Pre-emergents work much better when they are supported by effective crop competition.

“If you rely on pre-emergents you must have crop competition exerting pressure on the weed population.

“Keeping seed on the soil surface will also help.

“Current-generation pre-emergent herbicides are most effective when positioned at or below the seed, so keeping weed seeds on the surface will improve control by most pre-emergent herbicides.”

It is also critical to know when and how to use which chemical, with solubility a key issue, he said.

“Trifluralin and Stomp are the least water-soluble pre-emergents. Sakura is more soluble than Trifluralin and Stomp but considerably less soluble than Boxer Gold.

“Water-soluble herbicides cope better

with crop residue than products like trifluralin, but it is still advisable to manage crop residue so at least 50% of the soil surface is exposed at the time of application.”

“Less moisture is needed for activation of Boxer Gold than for Sakura. Our rule of thumb is that 5 to 10 mm of rainfall in the 10 days after sowing is fine for Boxer Gold but 10 to 15 mm is required for Sakura.

“If the soil is dry on the surface but moist underneath there may be sufficient moisture to germinate the weed seeds but not enough to activate the herbicide, which is likely to result in poor weed control. Using a more water-soluble product that needs less moisture to activate it will maximise the chance of achieving acceptable control in such conditions.”

More water-soluble herbicides that will move readily through the soil profile will work more effectively in low-moisture situations and are better suited to post-sowing pre-emergent applications than chemicals that are less water soluble. However, products with high solubility are more likely to cause crop damage after heavy rain, he said.

“Crops on soils with low organic matter, particularly sandy soils, are prone to crop damage from pre-emergent herbicides. 