



Factor tank mix to manage resistant weeds

"Farmers and agronomists on the Yorke Peninsula are realising we are up against it in the fight against herbicide resistance." says Chris Davey from YP AG.



With winter cropping now in full swing, more and more grain growers are turning to herbicide tank mixes to control resistant weeds like annual ryegrass and wild oats.

Broadacre farmers around the country are finding that tank mixing full rates of clethodim with Factor® (butroxydim) gives far better control of annual ryegrass and wild oats in pulse crops than either herbicide used alone.

Their experience is backed by research by Nufarm and leading researchers such as Dr Peter Boutsalis from Plant Science Consulting and the University of Adelaide's Weed Resistance Team headed by Professor Christopher Preston.

Chris Preston's team has confirmed that several target site resistance mutations can occur in a single paddock and each ryegrass plant may have a different resistance profile.

"Single surviving weed can produce hundreds of seeds in just one season."

Dr Peter Boutsalis, Plant Science Consulting

Strategy for control of resistant ryegrass

However, the best strategy for post-emergent control of resistant ryegrass is combining the efficacy of clethodim and Factor in a tank mix.

Chris Davey, senior agronomist and one of the founding partners of YP AG on the Yorke Peninsula, agrees with this approach and it is being successfully utilised by a growing number of the company's farmer clients.

"Our testing shows ryegrass resistance to clethodim averages around 40%, but ranges from 0 to 100%," Chris said.

"When we test Factor alone on resistant ryegrass, it ranges from 0 to 40%.

"But when we mix 180 g/ha of Factor with 500 ml/ha of clethodim as recommended, there's a synergistic effect between the enzymes in the two chemicals and the results are excellent.

"Instead of $1 + 1 = 2$, we find that it's more like $1 + 1 = 5$."

Although Factor controls weeds in a similar way to clethodim and is a 'dim' herbicide, researchers have found subtle differences and shown that even where clethodim resistance occurs, Factor plus clethodim offer effective control, particularly when mixed with Supercharge® Elite.

Chris says this tank mix is proving valuable for controlling resistant ryegrass in a range of legume crops and pastures including lentils, chickpeas, faba beans, field peas, vetch and medic.

"Annual ryegrass costs the most in terms of the dollars lost to crop competition and overall resistance status, but brome grass is the sleeping dog," he said.

"Brome grass is now developing resistance to Group A fop and dim chemistry and this is more alarming because there are fewer control options, with only Group B chemistry left.

"This situation is making everyone sit up and take notice."



For more information, contact your local Nufarm Territory Manager.

Trial data for annual ryegrass control

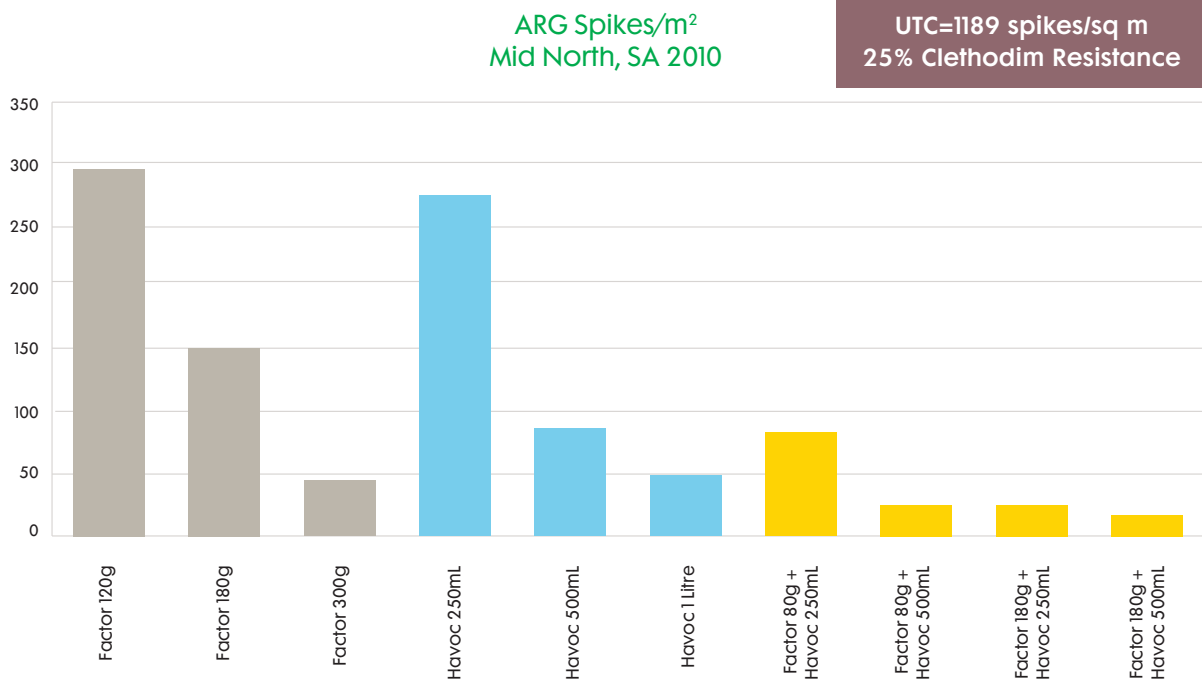


Figure 1: Trial data shows that where there are multiple mutations present in a paddock, a mixture of Factor and Havoc® (clethodim) gives better control of annual ryegrass than using either herbicide alone. ARG control is even more robust with the addition of 1% Supercharge® Elite

Steps to increase crop competition to manage herbicide resistant ryegrass. Recommended by Chris Davey

Consider growing a more competitive crop like barley instead of wheat, and then choosing more competitive varieties like Compass which is highly tillered compared with Spartacus.

Consider sowing east-west, as this has been shown to significantly reduce ryegrass seed set in trials by YP AG and research led by Dr Catherine Borger from the WA Department of Primary Industries and Regional Development.

Increasing sowing rates by 20-30% so crops compete better, and decreasing row spacing. (Work by Peter Newman from the Australian Herbicide Resistance Initiative has shown that the closer the row spacing, the less likely it is that resistant weeds will germinate).

Consider delayed sowing or 'strategic sowing', to allow ryegrass to germinate in grassy paddocks and then apply a knockdown herbicide before sowing.

Consider 'stacking' pre-emergent herbicides together, tank mixing two Group J herbicides such as Avadex® Xtra and Sakura® in wheat, rather than relying on one alone, as the tank mix gives enhanced performance.



Chris Davey,
Senior Agronomist at YP AG



Dr Peter Boutsalis,
Plant Science Consulting



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