

Post sowing pre-emergent chemical control of ryegrass

SUMMARY

Diuron at 1L or 2L applied post sowing pre-emergent in a wheat crop was not effective in controlling fop and dim resistant ryegrass. However, Diuron with Dual Gold or Dual Gold on its own (especially at the 0.5L rate) had better control of ryegrass. The level of control was not sufficient in a commercial sense but it may be in combination with trifluralin or with other ryegrass control strategies. Dual Gold is a Group K herbicide and will not initially add to a resistance problem.

With fop and dim resistant ryegrass populations increasing, many growers are using trifluralin to achieve early control of ryegrass. It will only be a matter of time before ryegrass resistant to trifluralin becomes common place. We need to investigate alternative strategies to combat the spread of resistant ryegrass. Some of these strategies will be non-chemical (eg: burning stubbles, cultivation, seed collection systems) others will be based on herbicides but from different groups (avoiding to the high-risk groups, which are Groups A, B and D).

METHOD

Immediately post sowing Rosella wheat, herbicide treatments were applied. Dual (Metolachlor – Group K) and Diuron (Group C) were applied at two rates and as a mix, in a replicated plot design. Ryegrass population was counted in early August.

RESULTS

Table 2.14 Cost, wheat yield and ryegrass counts for different ryegrass herbicide control options

Chemical	Status	Cost \$/ha	Yield t/ha	Ryegrass pl/m ²
Control			2.65	115
Diuron 1L	NR	8.0	2.63	112
Diuron 2L	NR	16.0	2.98	88
Dual Gold 0.25L	NR	11.5	2.89	71
Dual Gold 0.5L	NR	23.0	3.49	37
Diuron 1L Dual Gold 0.25L	NR	19.5	3.06	50
Significant Difference:			P<0.001 LSD=0.31	P<0.001 LSD=29

INTERPRETATION

Wheat yield was severely restricted by the high competition in the treatments that had little control of the ryegrass (control and low rates of Diuron and Dual Gold). At the higher rates of Diuron and Dual Gold and in the mix of the two chemicals at low rates, the ryegrass population was significantly reduced, and yields improved through the reduction in competition.

COMMERCIAL PRACTICE

Dual Gold, a Group K herbicide should be investigated in more detail for its efficacy in controlling or suppressing ryegrass in wheat and barley. These trials demonstrated that on its own, Dual Gold, was not effective enough to reduce fop

and dim resistant ryegrass to commercially acceptable levels. Ryegrass at 37 plants per square metre would produce unacceptable levels of seed, which would need to be controlled in following years. Investigations should aim to use post sowing pre-emergent Dual Gold in combination with trifluralin either applied pre-sowing or post sowing pre-emergent.