

Trifludimoxazin: A new novel herbicide for grass and broadleaf weed control in Australian winter cereals

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Summary Trifludimoxazin [1,5-dimethyl-6-thioxo-3-(2,2,7-trifluoro-3,4-dihydro-3-oxo-4-prop-2-ynyl-2H-1,4-benzoxazin-6-yl)-1,3,5-triazinane-2,4-dione] is a potent, novel inhibitor of protoporphyrinogen IX oxidase (PPO or Protox). Trifludimoxazin is very active when applied PRE or POST on dicotyledons/broadleaf weeds such as wild radish (*Raphanus raphanistrum* L.), and has also demonstrated activity on key monocotyledons/grass weeds including annual ryegrass (*Lolium rigidum* Gaud.). The combination of trifludimoxazin plus saflufenacil improved the

spectrum of burndown and residual weed control over either herbicide applied alone. Trifludimoxazin is expected to receive its first registration in Australia for use in pre-plant burndown and pre-emergent residual weed control in winter cereals. This registration will provide Australia cereal growers a valuable new tool in management of weeds including species resistant to alternate modes of action.

Keywords Trifludimoxazin, cereals, broadleaf weed, wild radish, annual ryegrass, resistance.