

Effect of Surfactants and Their Concentrations Against *Phalaris minor* Control in Wheat (*Triticum aestivum*)

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Abstract

Phalaris minor Retz (Littleseed canary grass) is a dominant grassy weed in the north-western wheat belt states of India and can cause complete wheat crop failure if not controlled. Several herbicides (isoproturon, sulfosulfuron, clodinafop and tralkoxydim) were recommended but farmers mainly uses sulfosulfuron. The efficacy of foliar applied herbicides is greatly influenced by adjuvant, but not all adjutants have a synergistic effect. Surfactants/adjuvants are generally added with herbicides and other agrochemicals to improve the biological efficacy, maintain efficacy under adverse conditions, reducing environmental hazards by minimizing drifts, etc. Mixing of herbicides with surfactants has been advocated as a strategy to increase weed control efficiency and to avoid resistance development. In this context studies were undertaken to test the efficacy of sulfosulfuron with different concentrations of surfactants against grasses and broadleaf weeds in wheat crop. Sulfosulfuron 25 g ha⁻¹ applied with different concentrations of surfactants (0.1 to 0.5%) provided satisfactory control of *P.minor* and other weeds without any phytotoxic effect on wheat crop. With the increase in the surfactant concentration from 0.1 to 0.5% grass weed control efficacy of sulfosulfuron increased gradually.

Key words: *Phalaris minor*, Sulfosulfuron 75 WG, Surfactant

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