

Efficacy of Pre and Post Emergence Herbicides on Sequential Basis for Weed Control in Soybean (*Glycine max* L.)

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ABSTRACT

A field experiment was carried out during *kharif* 2010 to study the effect of pre emergence (Diclosulam 22 g ha⁻¹, Oxyfluorfen 0.1 kg ha⁻¹ and Chlorimuron-p-ethyl 9 g ha⁻¹) and post emergence (Imazethapyr 75 g ha⁻¹, Quizalofop-p-ethyl 75 g ha⁻¹, Fenoxypyr-p-ethyl 75g ha⁻¹ and Chlorimuron-p-ethyl 9 g ha⁻¹) herbicides either alone or in sequence along with standard check (Alachlor 2 kg ha⁻¹ + 2 IC (30 & 45 DAS) + 2 HW (30 & 45 DAS) on weed control in soybean. Result revealed that sequential application of Oxyfluorfen 0.1kg ha⁻¹ fb Imazethapyr 75g ha⁻¹ and Diclosulam 22g ha⁻¹ fb Imazethapyr 75 g ha⁻¹ were quite effective in controlling weeds at 30 & 60 days as reflected in significantly lower weed count, dry matter, nutrients uptake and higher weed control index. Significantly higher soybean seed yield (27.21 and 25.96 q ha⁻¹, respectively) was also obtained in the same treatments. The growth (total dry matter) and yield parameters (pods per plant, seed weight per plant and 100 seed weight) followed the similar trend as that of seed yield. Higher net returns and B: C ratio were recorded with the application of Oxyfluorfen 0.1 kg ha⁻¹ fb Imazethapyr 75g ha⁻¹ (Rs 41,030 ha⁻¹ and 3.18) and Diclosulam 22g ha⁻¹ fb Imazethapyr 75 g ha⁻¹ (Rs 38,384 ha⁻¹ and 3.05) than other treatments.

Key words : Economics, Pre and post emergence herbicides, Sequential application of herbicides, Soybean, yield.