

Efficacy of Post Emergence Herbicides on Weed Control and Yield of Blackgram (*Vigna Mungo* (L.) Hepper

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A Field experiment was conducted to study the effect of post emergence herbicides on weed control and yield of blackgram, to find out its effective concentration along with the proper stage of spraying in improving weed control, yield parameters and yield of blackgram plants. Present investigation was under taken with post emergence herbicides viz., imazethapyr @ 50g and combined use of acifluorfen sodium 16% EC + clodinafop propargyl 8% EC (24%EC) @ 180, 240 and 300g a.i ha⁻¹ applied at 15 and 25 DAS, weed free check (hand weeding at 15 and 30 DAS) and weedy check were tested in three replicate under RBD design. Treatment of weed free check was found best by recording highest weed control efficiency, plant dry weight, yield parameters and yield of blackgram. It was at par with acifluorfen sodium + clodinafop propargyl @ 300g a.i ha⁻¹ at 15 DAS closely followed by acifluorfen sodium + clodinafop propargyl @ 240g a.i ha⁻¹ at 15 DAS. An application of acifluorfen sodium + clodinafop propargyl @ 300g a.i ha⁻¹ at 15 DAS was found most effective in reducing weed population (viz., monocots and dicots weeds) and resulted in less dry weight of weeds, higher weed control efficiency (70.63%) and it was closely followed by acifluorfen sodium + clodinafop propargyl @ 240g a.i ha⁻¹ at 15 DAS. The highest grain yield recorded in acifluorfen sodium + clodinafop propargyl @ 300g a.i ha⁻¹ at 15 DAS (1050.20 kg ha⁻¹) followed by acifluorfen sodium + clodinafop propargyl @ 240g a.i ha⁻¹ at 15 DAS (1001.60 kg ha⁻¹) than other doses and control. The favourable economic benefit in terms of benefit-cost ratio was observed by the application of acifluorfen sodium + clodinafop propargyl @ 240g a.i ha⁻¹ at 15 DAS.

Key words: *Post emergence herbicides, RBD (Randomised Block Design), Weed control and Yield.*