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RESEARCH ARTICLE :

New generation herbicide combinations on weed indices, yield and economics of transplanted rice in Telangana state

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SUMMARY : An experiment was conducted during *Kharif*, 2013 and 2014 at Hyderabad with 14 treatments consisting of pre emergence application of pretilachlor 625 g, pyrazosulfuron 20 g and bensulfuron methyl 60g+pretilachlor 600 g at 3 DAT, penoxulam 22.5 g and cyhalofop-p-butyl 100 as early post emergence at 15 DAT, bispyribacsodium 25 g and pretilachlor 750 g their combinations with ethoxy sulfuron 18.75g, metsulfuron methyl+ chlorimuron ethyl 4g, azimsulfuron 35g, pyrazosulfuron 20 g ha^{-1} at 3DAT followed by hand weeding at 25 DAT, hand weeding twice at 25 and 45 DAT and weedy check in RBD replicated thrice. During both years of investigation the higher weed control efficiency and herbicide efficiency index was noticed with hand weeding twice at 25 and 45 DAT (81.12, 2.76), pyrazosulfuron ethyl 20 g ha^{-1} as PE at 3DAT followed by manual weeding at 25 DAT (79.83, 2.57) and pretilachlor 750 g ha^{-1} as PE at 3 DAT followed metsulfuron methyl+chlorimuron ethyl 4 g ha^{-1} as PoE at 25 DAT (76.51, 2.23) respectively due to its selectivity and high bio efficacy. Significantly higher grain yield (6685 kg ha^{-1}) and gross returns (Rs 62273 ha^{-1}) was noticed with hand weeding twice at 25 and 45 DAT and was comparable with pyrazosulfuron ethyl 20 g ha^{-1} as PE at 3 DAT followed by manual weeding at 25 DAT (6630), pretilachlor 750 g ha^{-1} as PE at 3 DAT followed metsulfuronmethyl +chlorimuron ethyl 4 g ha^{-1} as PoE at 25 DAT (6423) and bispyribac sodium 20 g ha^{-1}+metsulfuron methyl+chlorimuron ethyl 4 g ha^{-1} as PoE at 25 DAT (Rs 6176 ha^{-1}). However, pyrazosulfuron ethyl 20 g ha^{-1} as pre emergence at 3 DAT followed by manual weeding at 25 DAT noticed higher net returns (Rs 63541 ha^{-1}) and B:C ratio (2.67).

KEY WORDS :
Weed indices, Transplanted rice, herbicides

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