HERBICIDAL WEED CONTROL IN INDIAN MUSTARD (BRASSICA JUNCEA L.)

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Abstract: Field investigations were carried out at Institute of Agricultural Sciences, Banaras Hindu University, Varanasi (U.P.) during the winter (rabi) seasons of 2010-11, 2011-12 and 2012-13 to assess the effect of different herbicidal weed control practices on yield and economics of Indian mustard (Brassica juncea L.). The treatments comprised pre-emergence applications of pendimethalin 1.0 kg/ha, oxadiargyl 0.09 kg/ha, oxyfluorfen 0.15 kg/ha and isoproturon 1.0 kg/ha, quinazlofop 0.06 kg/ha, clodinafop 0.06 kg/ha and isoproturon 1.0 kg/ha 30 days after sowing (DAS), weedy check and weed free. Broadleaved weeds like Chenopodium album L., Anagallis arvensis L., Melilotus indica (L.) All., Vicia sativa L. and Rumex acetosella L. were more predominant than grass and sedge weeds, accounting for 57.9% of total weed flora. Based on the three years studies, weeds in mustard annually caused 23-42% loss in yield. Among all herbicidal treatments, oxadiargyl 0.09 kg/ha was found to be the most effective in reducing the population of broadleaved weeds, grasses and sedges as compared to other herbicidal treatments. Pre-emergence application of oxadiargyl at 0.09 kg/ha recorded minimum weed population and dry weight of weeds which was found to be the most effective and gave maximum seed yield of mustard. Herbicide, oxadiargyl 0.09 kg/ha gave higher net return due to weed control over other treatments and also resulted in highest net return per rupee invested (1.69) on weed control.

Keywords: Herbicidal weed control, Mustard, Yield, Economics

REFERENCES


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