

PERFORMANCE OF NEW HERBICIDE MOLECULES FOR WEED MANAGEMENT IN MAIZE

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Abstract: A field experiment on “performance of new herbicide molecules for weed management in maize” was conducted on the RMD College of Agriculture & Research Station, Ambikapur, during the *kharif* season of 2019-20. Soil of the experimental field was sandy loam in texture. Nine treatments herbicidal combination of weed management practices were study in randomized block design and 3 times replicated under rainy season. weed control treatments atrazine 1000 g ha⁻¹ (P.E.) fb topramezone 25.2 g ha⁻¹ at 25 DAS was preformed mostly higher than all the other herbicidal treatments for growth, yield attributes viz., cob length, cob girth, number of kernel rows cob⁻¹, number of kernels row⁻¹, 100 kernel weight and kernel yield (5954.00 kg ha⁻¹) and also found lower weed density, lower weed dry weight and effective for complex weed flora. which was found statistically at par with atrazine 1000 g ha⁻¹ (P.E.) fb tembotrione 120 g ha⁻¹ at 25 DAS and atrazine 750 g ha⁻¹ (P.E.) fb topramezone 25.2 g ha⁻¹ at 25 DAS. At 60 DAS, lower weed index and higher weed control efficiency recorded with atrazine 1000 g ha⁻¹ (P.E.) fb topramezone 25.2 g ha⁻¹ at 25 DAS. Although weed free check is most effective treatment as compare to herbicidal combinations. Highest net returns and B:C ratio was recorded in atrazine 1000 g ha⁻¹ (P.E.) fb topramezone 25.2 g ha⁻¹ at 25 DAS (₹ 66082.62 ha⁻¹ and 1.49) followed by higher net return under atrazine 1000 g ha⁻¹ fb tembotrione 120 g ha⁻¹ at 25 DAS (₹ 62573.43 ha⁻¹), atrazine 750 g ha⁻¹ fb topramezone 25.2 g ha⁻¹ at 25 DAS (₹ 62506.87 ha⁻¹) and higher B:C ratio atrazine 750 g ha⁻¹ fb topramezone 25.2 g ha⁻¹ at 25 DAS (1.42) and atrazine 1000 g ha⁻¹ fb tembotrione 120 g ha⁻¹ at 25 DAS (1.39).

Keywords: Maize, Weed management, Herbicide Combinations

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