



Post Emergent Non Chemical Formulations for Weed Management in Maize

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Abstract: The objectives of the study were to find out the best post emergent non chemical formulations for weed management in maize. Among the weeds, itchgrass (*Rottboellia cochinchinensis*) was dominant. Lower total dry weight of weeds were at 20 days after sowing (DAS) in plots treated with vinegar 20%, followed by traditional formulation @ 10 l ha⁻¹ (cow urine + lemon fruit + *Terminalia chebula*). At 45 DAS, lower dry weight of weeds was observed in hand weeding twice on 20 and 45 DAS. At 20 DAS, more than 88% weed control efficiency was observed in post emergence application of vinegar 20 % and post emergence application of vinegar 20 + hand weeding on 45 DAS. Among different post emergent non-chemical formulations, higher grain yield (7214 kg ha⁻¹), lower weed index (1.38%) and higher returns on invest (93.29) were obtained in post emergence application of vinegar 20% + hand weeding on 45 DAS followed by early post emergence application of traditional formulation @ 10 l ha⁻¹ (cow urine + lemon fruit + *T. chebula*) + hand weeding on 45 DAS.

Keywords: Maize, Non chemical formulation, Vinegar, Weed flora, Weed management
