



Research Article

Effect of post- emergence herbicides in groundnut and its residual effect on succeeding crops

P.M. VAGHASIA AND M.V. NADIYADHARA

ABSTRACT : A field investigation was carried out at Main Oilseeds Research Station, Junagadh Agricultural University, Junagadh, during *Kharif* 2011 and 2012 on clayey soil to study the efficacy of post emergence herbicides on *Kharif* groundnut and its residual effect on succeeding crops of wheat and gram. An experiment was done with eleven treatments of post-emergence herbicides comprising weedy check replicated thrice in Randomized Block Design (RBD). The various weeds observed in groundnut field during *Kharif* season were, among the narrow leaved weeds the *Echinochloa colonum*, *Dinebra. retroflexa*, *Dactyloctenium aegyptium* and *Brachiaria* Spp. were more rampant. The broad leaved weeds like, *Commelina benghalensis*, *Digera arvensis*, *Indigofera glandulosa* and *Amaranthus viridis* was marked their presence in good numbers. Based on two years field experimentation, it was found that early post emergence application of Odyssey 70 % WG at 70 g ha¹ + MSO adjuvant @ 2ml/litre of water gave significantly lower total weed density(6.34), weed dry weight(96 g m²)and higher weed control efficiency (75 %). Application of new formulation of Odyssey 70 % WG at 70 g ha¹ + MSO adjuvant @ 2ml/litre of water as early post emergence herbicide kept the weed density and dry weight below the economic threshold level and increased the pod yield, haulm yield and kernel yield (1411,2783 and 1010 kg ha¹, respectively) and this was at par with early post emergence application of Imazethapyr 10% SL @ 100 g ha¹ + MSO adjuvant @ 2.0 ml/litre of water and Quizolofop ethyl 5% EC 50 g ha¹ in groundnut. Succeeding crops like wheat and gram sown immediately after the harvest of groundnut was not affected by the residue of herbicides at all different doses.

KEY WORDS : Groundnut, Weed density, Weeds control efficiency, Yield, Succeeding crops

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MEMBERS OF RESEARCH FORUM

Address of the Correspondence :

P.M. VAGHASIA, Main Oilseeds Research Station, Junagadh Agricultural University, JUNAGADH (GUJARAT) INDIA
Email : pmvjnd@rediffmail.com

Address of the Coopted Authors :

M.V. NADIYADHARA, Main Oilseeds Research Station, Junagadh Agricultural University, JUNAGADH (GUJARAT) INDIA