Studies on Bio-efficacy of Herbicide Mixtures for Weed Management in *Rabi* Groundnut

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ABSTRACT

A field experiment was conducted at the wetland farm of S.V. Agricultural College, Tirupati during *rabi*, 2016 to study the effect of herbicide mixtures for weed management in groundnut (*Arachis hypogeae* L.). At 20 DAS pendimethalin + imazethapyr @ 1000 g *a.i* ha^{-1} was found to be effective in controlling the weeds. Two hand weedings at 20 and 40 DAS was found to be effective to control the weeds in groundnut and recorded the lowest weed density, weed dry weight and higher weed control efficiency and yield attributes *viz,* hundred pod weight, hundred kernel weight, shelling percentage, pod yield, kernel yield and gross returns which was at par with pre-emergence application of pendimethalin @ 1000 g *a.i* ha^{-1} *fb* one hand weeding at 20 DAS and post-emergence application of imazethapyr @ 37.5 g *a.i* ha^{-1} + quizalofop-p-ehtyl @ 25 g *a.i* ha^{-1}. Among the herbicide mixtures Imazethapyr @ 37.5 g *a.i* ha^{-1} and quizalofop-p-ethyl 25 g *a.i* ha^{-1} applied as post-emergence at 2-4 leaf stage of the weeds is the effective herbicide mixture for broad spectrum weed control as well as to enhance the productivity of *rabi* groundnut.

Key words: *Groundnut, Herbicide mixtures, Pod yield, Weed management.*