

Effect of Sequential Application of Herbicides on Growth and Yield of Sunflower (*Helianthus annuus* L.)

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ABSTRACT

Field experiment was conducted to study the effect of sequential application of pre- (pendimethalin @ 1 kg *a.i* ha⁻¹, oxadiargyl @ 250 g *a.i* ha⁻¹) and post-emergence (fenoxaprop-p-ethyl @ 60 g *a.i* ha⁻¹, propaquizafop @ 60 g *a.i* ha⁻¹, quizalofop-p-ethyl @ 50 g *a.i* ha⁻¹) herbicides in sunflower on sandy loam soils of Southern Agro-Climatic Zone of Andhra Pradesh. The study revealed that pre-emergence application of pendimethalin @ 1 kg *a.i* ha⁻¹ + propaquizafop @ 60 g *a.i* ha⁻¹ applied at 20 DAS resulted in significantly higher seed yield and lesser density and dry weight of weeds with higher weed control efficiency compared to rest of the weed management practices. The next best treatment was the two hand weeding at 20 and 40 DAS produced higher seed yield and lesser weed density and dry weight. The reduction in seed yield of sunflower due to unchecked weed growth was 50.03 per cent compared to the best weed management practice *i.e.*, pre-emergence application of pendimethalin @ 1 kg *a.i* ha⁻¹ + propaquizafop @ 60 g *a.i* ha⁻¹ applied at 20 DAS.

Key words : Growth, Sequential application of herbicides, Sunflower, Yield.p