Investigation on Herbicides Efficacy to Weeds Control in Lentil (*Lens culinaris* Med.)

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Abstract
In order to study the effect of herbicides [Ethalfuralin EC3.33% (3 L ha\(^{-1}\)), Trifluralin EC48% (2 L ha\(^{-1}\)), Pendimethalin EC33% (2.5 L ha\(^{-1}\)), Imazethapyr SC10% (1 L ha\(^{-1}\)), Metribuzin WP 70% (1 kg ha\(^{-1}\)), Simazine (1 kg ha\(^{-1}\)), Prometryn (1 kg ha\(^{-1}\)), simazine plus prometryn (0.5+0.5 kg ha\(^{-1}\)) and weedy check and two times weeding in lentil an experiment was conducted as randomized completely block design with 12 treatments and 3 replications at Korramabad in 2013. The most important weed species in the experiment were Safflower (*Carthamus oxyacantha* M. Bieb), Catchweed bedstraw (*Galium tricornutum* subsp.), Wild mustard (*Sinapis arvensis* L), Cow cockle (*Vaccaria grandiflora* (Ser.) Jaub. & Spach), Chickweed (*Conringia orientalis* (L.) Dumort.). The average of weed density in weedy control condition was 133 plant m\(^{-2}\). By investigation of effects of different herbicides on these weeds became clear that treatment imazethapyr (0.75 L ha\(^{-1}\)) with 99 percent reduction in the number of weeds compared with weedy check treatment, was the best treatment and pendimethalin (3.5 L ha\(^{-1}\)) with 6.7 percent efficacy in weed control was the worst. Based on this results among whole of herbicides that those use in this expriment only metribuzin(1 kg ha\(^{-1}\)) had significantly phytotoxic effect on lentil. So, for weed control in lentil farm is not recommended.

Key words: Korramabad, Weed density, Weed biomass, Hand weeding

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