

## **Abstract**

Among the several factors reducing plants yield, weed interference has great important. In recent decades, environmental problems resulted from the use of chemical fertilizers has an adverse effect on the life cycles and sustainability of farming ecosystems. To investigate the effect of fertilizer types and weeds management on yield, yield components and nitrate leaching in corn and soybean planting, an experiment was conducted as split factorial based on a randomized complete block design with three replications in Chalus city during two growing seasons of 2013 and 2014. Fertilizers types including chemical fertilizer, manure and nano-chelates spraying as the main plot and combination of crop and weed control in six levels including corn + emergence to flowering, corn + critical period of weed interference, corn + no weeding, soybean + emergence to flowering, soybean + critical period of weed interference and soybean + no weeding were considered as sub-plots. The results showed that yield with control at critical time as well as control until flowering was achieved in a statistical group and were significantly more than non-control treatment. The highest weeds dry weight was obtained in no weeding treatment and increase weed control time caused their weight loss. No significant difference was observed among the fertilizer treatments, but the highest dry weight of weeds was obtained by chemical fertilizer use. Maximum nitrate concentration of soil at a depth of 80-100 cm were obtained by using chemical fertilizer. Weeds dry weight increased and the nitrate leaching of soil decreased when the weed control duration was reduced. Regarding the lack of statistical difference of grain yield among the fertilizer treatments and also between weed control in critical period and control from emergence to flowering and increase nitrate concentration in weeding from emergence to flowering, it is sufficiently can be controlled weeds at the critical stage. The use of animal manure would be appropriate as an ecological approach for nutrient management of crops.

**Key words:** Manure, Oil percent, Protein content, Weeds dry weight.



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