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SEED RATE AND HERBICIDE EFFECTS ON WEEDS POPULATION AND GROWTH AND YIELD-RELATED TRAITS OF WHEAT (*TRITICUM AESTIVUM* L.)

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SUMMARY

The presented study determined the effects of wheat seed rate and herbicide types on weed population and growth and the grain yield of wheat (*Triticum aestivum* L.). The experiment had a randomized complete block design with a split plot arrangement and two factors. The first factor was three seed rates (100, 150, and 200 kg ha⁻¹), and the second was the use of two herbicides (chemical herbicide 'Chevalier' at 300 g ha⁻¹, and biological herbicide 'Trichozon' 2 g m⁻²), with the control treatment (with no herbicide). The results showed the significant superiority of the highest seed rate (200 kg ha⁻¹) recording minimal weeds and the lowest weed dry weight per square meter. The said seed rate also gave the highest plant height, number of tillers and spikes, and grain and biological yields. In contrast, the seed rate of 100 kg ha⁻¹ emerged with the maximum weeds, weed dry weight per square meter and number of kernels per spike. The chemical herbicide Chevalier showed superiority in recording the least weeds and lowest weed dry weight per square meter, the highest plant height, number of tillers and spikes per meter square, and maximum grain and biological yields.

Keywords: Wheat, seed rate, herbicide types, weeds population, growth and yield traits

Key findings: The study revealed the seed rate of 200 kg ha⁻¹ and the use of chemical herbicide 'Chevalier' reduced the weeds population and its dry weight in the wheat crop, which eventually enhanced the crop's growth and yield.

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