

Exploring the potential of Selenium (Se) and Moringa (*Moringa oleifera* L.) leaf extract on the production and performance of *Triticum aestivum* L.

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ABSTRACT:

Selenium (Se) is a fundamental trace element present in the living organisms and has a high impact on human health, animal and plants. Due to the antioxidant property, selenium plays a vital role in enhancing the growth of plants. With respect to natural plant growth stimulants, *Moringa oleifera* L. had attained much importance having leaves enriched with micro and macro nutrients, antioxidant and cytokinin when applied in low concentration and influenced the agronomic growth. A research was laid to explore the potentials of moringa leaves allelopathic extract and selenium (Se) on the production of wheat. The research was laid out in Randomized complete block design (RCBD) with four replications having net plot size dimension i.e. 5m × 1.8m. Various data such as stand establishment and germination data were recorded by recommended protocols and analyzed statistically by using Fisher's analysis of variance techniques and treatment means were compared by using LSD (Least Significant Difference test) having 5% level of probability. Results concluded that foliar application of selenium significantly influenced the recorded attributes of wheat. Harvest index, biological yield, grain yield, thousand grain weight, grain per spike, spike length and total tillers were improved upto 15.18%, 8.85%, 25%, 18.52%, 18.91%, 26% and 11.94% respectively by foliar application of selenium (Se) with respect to the control. The study concluded that utilization of selenium as seed coating, seed priming or as foliar application in cropping system must be done in order to maximize the production of cereals for overcoming the issue of food security.

Keywords:

Selenium, Antioxidant, Bio-stimulants, Moringa leaves extract, Wheat.