

QUALITY SEED PRODUCTION OF BRINJAL INFLUENCED BY DIFFERENT PLANT NUTRITION

Dr. Tahmina Mostarin*

Executive Summary

Seed production is influence by different components like plant nutrition, cultivar, soil and climate, seedling age, bulb weight, spacing, fertilization, date of sowing. An experiment was carried out to investigate the quality seed production of brinjal influenced by different plant nutrition at the farm of Sher-e-Bangla Agricultural University, Dhaka during period from October 2017 to March 2018. Two factors, experiment included 4 macro nutrients treatments viz., F₀ (Control, N₀ P₀ K₀ kg/ha), F₁ (N₁₅₀ P₃₀ K₁₀₀ kg/ha), F₂ (N₁₇₀ P₅₀ K₁₂₅ kg/ha) and F₃ (N₁₉₀ P₇₀ K₁₅₀ kg/ha) and 3 micro nutrients treatments viz. N₀ (Control, Zn₀, B₀), N₁ (ZnSO₄; 0.5%) and N₂ (Borax; 0.5%) were delineated in Randomized Complete Block Design (RCBD) with three replications. Results showed that macro nutrients, micro nutrients treatments and their combinations showed significant variation among the treatments on growth and yield parameters. In case of macronutrients, the highest fruit yield per hectare (31.56 t), and seed weight per hectare (1673.00 kg) were obtained from the treatment F₂ (N₁₇₀ P₅₀ K₁₂₅ kg/ha) where the lowest results on respected parameters were found from control treatment F₀ (N₀ P₀ K₀ kg/ha). Regarding, micronutrient application the highest fruit yield per hectare (13.91 t) and seed weight per ha (1608.00 kg) were attained from the treatment N₂ (Borax; 0.5%) where the lowest results on respected parameter were achieved from the control treatment of N₀ (Control, Zn₀, B₀). In terms of combined effect of macro and micro nutrients, the highest number of fruits per plant (19.09), the highest single fruit weight (60.58 g), the highest fruit yield per plant (1157.00 g), the highest fruit yield per plot (13.88 kg), highest fruit yield per hectare (42.84 t), number of seeds per fruit (711.40), seed weight per fruit (3.18 g), seed weight per plant (60.72 g), seed weight per plot (728.60 g) and seed weight per ha (2249.00 kg) were found from the treatment combination of F₂N₂ where the lowest results were obtained from the treatment combination of F₀N₀. Regarding seed viability test, F₃N₂ produced seed gave the highest seed vigor index (1013.6) where the lowest (425.8) was found from the seeds achieved from the treatment combination of F₀N₀.

* Professor, Dept. of Horticulture, Sher-e-Bangla Agricultural University, Dhaka-1207