

Effect of Initial Seed Moisture Content on Seed Growth Quality Parameters and Storability of Brinjal (*Solanum melongina* L.)

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Quality seed is the basis in high agricultural productivity and average seed germination in brinjal was reported as below 70% under local conditions. This problem was reported especially in "Lenairi" and "Padagoda" brinjal varieties. Hence this experiment was carried out to compare the effect of Initial Seed Moisture Content (ISMC) on growth quality parameters under non storage and storage conditions in different brinjal varieties. Experiment was designed in Complete Randomized Design with two and three factors having four replicates in each under non storage and storage conditions respectively. Three ISMC, 9%, 8%, 7% and four different varieties, Lenairi, Padagoda, Thinnavelli purple, Amanda were taken for this study. Brinjal seeds were tested initially for growth quality parameters and samples were stored for two months under ambient and refrigerated conditions. Findings revealed that, there was a highly significant effect of ISMC, variety and storage condition on seed germination and vigor. Under non storage condition, highest germination percentage (79.5%) was recorded in Padagoda at 9% initial seed moisture content. Highest vigor index (2147) was recorded in Thinnavelli purple at 9% initial seed moisture content. Under storage condition highest germination percentage (86.5%) was recorded in Padagoda at 8% initial seed moisture content stored in refrigerator. Highest vigor index (2837) was recorded in Amanda at 9% initial seed moisture content stored in refrigerator. Results indicated that highest germination percentage was observed at 9% ISMC under non storage condition. Seeds stored in refrigerator at both 9% and 8% ISMC were superior in storability compared to those stored in ambient condition in growth quality parameters. However, further studies are necessary to identify more suitable ISMC for commercial scale brinjal cultivation.

Keywords: Brinjal, Initial seed moisture content, Germination, Vigor