

Research Paper

## Seed Quality Improvement of Eggplant (*Solanum melongena* L.) through Canopy and Nutrient Management Package

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### Abstract

Brinjal or eggplant (*Solanum melongena* L.) is a perennial Solanaceous crop which is cultivated in Sri Lanka with an average yield of 11.9 t ha<sup>-1</sup>. Absence of quality seeds is a limiting factor to achieve potential yield of eggplant. Although the effects of plant canopy management on seed quality had been reported, very scanty information is available on the combined effects of canopy management and agronomic practices on the seed yield and seed quality of eggplant. This study was carried out to evaluate the effect of canopy management including fruit thinning, plant spacing and fertilizer application on the yield and quality of eggplant seed. The field experiment was conducted during 2015/ 16 *Maha* season, at the government seed farm, Kundasale, using the variety SM 164. Eight treatment combinations; two levels of canopy management with fruit thinning two levels of spacing and two fertilizer levels (recommended amount of fertilizer by the Department of Agriculture (DOA) and 1.5 times of the DOA recommendation were arranged in Randomized Complete Block Design with three replicates. Results of the study revealed that, canopy management with three shoots and seven fruits, at reduced spacing (60 cm × 60 cm) and increased fertilizer application was the best factor combination to achieve higher seed yield and enhanced seed quality attributes such as thousand seed weight, seedling vigor index etc., than the recommended crop management practice. This finding will help to fill the gaps of knowledge while providing valuable information to formulate recommendations for the development of a suitable agronomic package for quality seed production in eggplant.

**Keywords:** Brinjal, Canopy management, Fertilizer application, Fruit thinning, Plant spacing, Seed yield