

**PACKAGE FOR QUALITY FRUIT AND SEED
PRODUCTION OF TOMATO USING SHOOT
PRUNING AND FRUIT THINNING WITH
FERTILIZER AND PLANT DENSITY MANAGEMENT**

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ABSTRACT

Tomato (*Solanum lycopersicum* L.) is a mainly grown horticultural crop in Sri Lanka. Fertilizer, spacing, shoot pruning and fruit thinning are the important agronomic practices which contribute to the production of good quality fruits and seeds of tomato. There is no specific agronomic package for quality fruit production and seed production and the lack of good quality seed is a major constraint in tomato cultivation. This experiment was conducted to develop an appropriate production package of quality fruit and seed for tomato by manipulating fertilizer and plant density. Experiment was performed as randomized complete block design (factorial) with 3 replicates and 12 treatments. Three levels of fruit thinning and shoot pruning including, no pruning and fruit thinning, pruning and maintain 5 clusters per plant with 5 fruits, pruning and maintain 5 clusters per plant with 3 fruits. Two levels of spacing (80 x 50 cm and 50 x 50 cm) and 2 levels of fertilizer application (recommendation of Department of Agriculture and one quarter higher than the recommendation).

Shoot pruning and fruit thinning, reduced spacing and higher fertilizer application increased the fruit quality and seed quality. Especially in terms of brix, firmness, fruit width, fruit length, single fruit weight, seed yield per fruit and seedling vigour. However, fruit quality and seed quality is greatly enhance by pruning and fruit thinning. There was no significant different between plants maintain with 3 fruits and 5 fruits per cluster in shoot pruned plants, each with 5 clusters.

Key words: Pruning and fruit thinning, spacing, fertilizer, fruit quality, seed quality