

214/B

Influence of Harvesting Stage of Tomato Germplasm on the Yield and Quality of Seeds

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During the recent past, much attention has been focused on tomato crops by the farming community of Sri Lanka due to its multifarious benefits. However, farmers face many constraints in tomato crop production. Lack of good quality seeds is one of the major constraints faced by farmers. Therefore, the farmers should be encouraged to produce their own seeds to fulfill their requirements. The main purpose of this study is to identify the best tomato picking stage for quality seed production.

The selected tomato varieties/elite lines were T245, Rajitha, HF 01, HF 02, HT 1314, 5-14-60, 44-4-2, M120, M121 and M127. The experimental design was Randomized Complete Block Design (RCBD) with three replications. The trial was carried out in the fields of the Horticultural Crops Research and Development Institute during dry and wet seasons of 2005. The uniformly ripened fruits of the tested varieties were harvested at different picking stages and the seeds were extracted manually. There was a total of five picking stages. The total fruit yield, fresh and dry weight of seeds, seed recovery percentage, germination percentage and seed vigor were measured. Results revealed that in all tested varieties the percent seed recovery increased with subsequent pickings. The highest germination was observed in the first picking and decreased in advanced pickings. Similarly, seed content on dry weight basis of the varieties/lines showed a declining trend. Also seedling vigor index of the tested varieties decreased with each successive picking. Therefore, it is beneficial to use the fruits of the first three pickings for better quality seeds although the seed recovery percent is a little low in early picking stages.