

## Effect of Exogenous Growth Regulators on Seed Production of Tomato (*Solanum lycopersicon*) Variety Thilina

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Tomato (*Solanum lycopersicon*) is widely cultivated vegetable crop having high demand in Sri Lanka. Thilina is a popular tomato variety, but high cost in seed production due to the low seed number per pod. The effect of exogenous growth regulators on stimulation of true seed production in Thilina was studied using Gibberellic acid at 350 ppm and Cycocel at 1500 ppm. The level of the Gibberellic acid in flower stalk was changed by applying Gibberellic acid at two different times as two treatments and Cycocel twice as one treatment. Four treatments including control applied within two blocks in' Randomized Complete Block Design. Seed number and germination percentage of seeds obtained were observed and analyzed using SAS package. Results reveal that there was significant difference between treatments. Application of Gibberellic acid once and twice gave higher mean seed number than the mean seed number obtained from the other treatment and the control. Application of Cycocel and control gave lower mean seed number. There was no significant difference between application of Gibberellic acid once and twice. A significant difference was observed between application of Gibberellic acid and control. Application of Gibberellic acid once was the best treatment to increase the seed number of Thilina variety. Application of Gibberellic acid once was adequate to stimulate the increase of the seed number per fresh tomato fruit. Therefore application of Gibberellic acid twice to increase seed number was found to be a waste. The germination of the seeds obtained from all four treatments were more than 80% and results reveal that there was no effect on seed germination by application of Gibberellic acid and Cycocel to increase the seed number in tomato fruits.

Key words: Tomato, Growth regulators, Flower stalk, Seed number, Gibberellic acid, Seed germination