Crop loss assessment of tomato leafminer *Tuta absoluta* (Lepidoptera: Gelechiidae) in Hamedan province

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Tomato leafminer moth, *Tuta absoluta* Meyrick (Lep.: Gelechiidea) is one of the devastating pest of solanaceous crop plants causes considerable quantitative and qualitative damage to tomato product imports each year. The crop loss and economic injury level (EIL) of the pest was determined under field conditions in a randomized completed block design with five treatments including control (without *T. absoluta* egg infestation), 1, 2, 4 and 8 eggs per plant and in the second year control (without *T. absoluta* egg infestation), 2, 4, 8 and 16 eggs per plant. Each treatment replicated four times placed within ventilated wooden cages during 2014-2015. In order to measure crop loss of the tomato leafminer moth under field conditions, the length and width of fruits, fruit weight, damaged and the total leaf area, amount of chlorophyll and carotenoids, the number of damaged and healthy fruits, number of galleries and intact and damaged fruit percentage were measured and recorded. The regression analysis between number of galleries and other parameters were surveyed. Linear regression equation between the number of galleries and infected fruit number were estimated as $Y = 0.002 X + 4.801$, (R^2:0.59) and $Y = 0.003 X + 2.867$, (R^2:0.53), respectively in 2014 and 2015. Regression line equation between the number of galleries and percentage of infected fruit were estimated as $Y = 0.002 X + 12.113$, (R^2:0.5) and $Y = 0.002 X + 13.158$, (R^2:0.51), respectively in 2014 and 2015. Collectively, these results may be useful to develop a management strategy to control the tomato leafminer moth.

Keywords: Crop loss assessment, decision making levels, EIL, tomato leaf miner