

**EXPLORATION ON THE NATURAL ENEMIES OF TOMATO LEAF
MINER (*Tuta absoluta* M.) AND EFFICACY OF PREDATORY
BUGS AS BIOLOGICAL CONTROL AGENTS**

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Executive Summary

The South American tomato leaf miner *Tuta absoluta* (Meyrick) constitutes one of the major pests of tomato crop in Bangladesh. The objective of this work was to investigate on the natural enemies of tomato leaf miner. The study was carried out at Sher-e-Bangla Agricultural University during October 2021 to March 2022. As many as four predators of tomato leaf miner viz, minute pirate bug, lady bird beetle, mirid bug and spider were collected and identified. Both nymph and adult stage of minute pirate bug predated 22.5 and 19.5 tomato leaf miners respectively. Both the grubs and adults of lady bird beetle predated on all the stage of tomato leaf miner. Grub was found as voracious feeder showing a predation efficiency of 37.70 per hour while in case of adult the rate was 5.8 per hour. The nymph and adult of mirid bug consumed an average of 18.4 and 23.10 tomato leaf miner per hour. An unidentified species of spider was found to consume tomato leaf miner. In conclusion, this research successfully identified and evaluated four natural predators, including the minute pirate bug, lady bird beetle, mirid bug and an unidentified species of spider, as effective biocontrol agents against the tomato leaf miner *Tuta absoluta*.

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