

SCREENING OF POPULARLY GROWN POTATO VARIETIES AGAINST POTATO TUBER MOTH (*Phthorimaea operculella*) IN STORAGE CONDITION

Md. Mahmudul Hasan Sohel*

Executive Summary

The study was conducted in the laboratory of the Department of Entomology, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh during the period from November 2022 to April 2023 to find out screening of potato varieties against potato tuber moth, *Phthorimaea operculella* in storage condition. The experiment was laid out in Completely Randomized Design with three replications. The potato varieties tested were; BARI Alu-1 (Hira), BARI Alu-7 (Diamant), BARI Alu-8 (Cardinal), BARI Alu- 12 (Dhira), BARI Alu- 13 (Granolla), BARI Alu-25 (Asterix), BARI Alu-43 (Atlas), Lal-Pakhri, Shil-Bilati and BARI TPS-1. It was found that none of the varieties were completely immune to *Phthorimaea operculella*. But significant differences were observed among ten potato varieties on the highest number of adult emergences occurred in BARI Alu- 12 (Dhira) (50.66 ± 0.57) and the lowest number of adult emergences was found in BARI Alu-25 (Asterix) (22.33 ± 0.57). The highest adult life span of *P. operculella* was observed in BARI Alu- 12 (Dhira) (9.66 ± 1.15) whereas, the lowest life span was observed in BARI Alu-25 (Asterix) which was 6.00 ± 0.0 . Mean number of dead adults of *P. operculella* from different varieties of stored potatoes at different days more or less same and range was 2.0 ± 1.22 - 2.0 ± 2.82 . The highest tuber content loss was observed in BARI Alu- 12 (Dhira) (33.5 %) and the lowest was BARI Alu-25 (Asterix) (8.5%). Among the potato varieties BARI Alu- 12 (Dhira) was found the most susceptible host for *P. operculella* in respect of both growth and development and food consumption. On the other hand, BARI Alu-25 (Asterix) was the least susceptible variety for *P. operculella*.

*Assistant Professor, Department of Entomology, Sher-e-Bangla Agricultural University, Dhaka 1207