2-12. Effect of Temperature on Development and Reproduction of Rice Armyworm, *Pseudaletia separata*, (Lepidoptera: Noctuidae)

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Development and reproduction of rice armyworm, *Pseudaletia separata*, were investigated under different temperatures(13, 15, 18, 20, 25, and 30℃). It took 80.6 days to grow from egg to pre-adult at 15℃, 56.9 days at 18℃, 49.1 days at 20℃, 32.9 days at 25℃, and 27.3 days at 30℃. At 13℃, Eggs were not able to go through the larval stage. Lower threshold temperatures for egg, larva, pupa, and egg to pre-adult were 8.3, 7.3, 7.3, and 7.2℃, respectively. Total effective temperatures for larva, pupa, and egg to pre-adult were 67.8, 361.5, 176.7, and 616.9 degree days, respectively. Survival rate from hatched larva to pre-adult was the highest at 25℃. The longevity of female adults ranged from 0.8 days to 12.3 days and tended to longer with decreasing temperature. The average number of eggs reproduced per female was 405.9 at 15℃, 679.4 at 18℃, 721.8 at 20℃, 816.6 at 25℃, and 85.2 at 30℃. The intrinsic rate of natural increase(r_m) for rice armyworm were the highest as 0.175 at 25℃ and the net reproductive rate(R_0) was the highest as 913.0 at 25℃. As a result, optimum temperature for development and reproduction of rice armyworm was at 25℃.