

Comparison of biological and reproductive parameters between *Helicoverpa zea* and *Helicoverpa armigera* in Argentina

María G. Murúa; Sofía V. Fogliata; María I. Herrero; Martín A. Vera; Daniel R. Sosa-Gómez

The Heliiothinae complex (Lep.: Noctuidae) in Argentina encompasses *Helicoverpa gelotopoeon* (Dyar), *H. armigera* (Hübner), *H. zea* (Boddie), and *Chloridea virescens* (Fabricius). *Helicoverpa zea* and *H. armigera* are genetically and physiologically closely related species that have mating compatibility under laboratory conditions. Considering the presence of *H. armigera* in Argentina, the lack information about its biology and its evolutionary relationship with *H. zea*, the aim of this study was to compare biological and reproductive parameters of *H. zea* and *H. armigera* collected in Argentina. Collected larvae of both species were reared on artificial diet under controlled environmental conditions. Biological and reproductive parameters were evaluated. The biological parameters that presented significant differences between both species were egg and larva duration. The egg duration was 6.46 ± 0.09 and 3.53 ± 0.03 days and the larval duration was 24.5 ± 0.13 and 13.27 ± 0.21 days of *H. zea* and *H. armigera* respectively. Pupa duration, male and female longevities were in general 11, 12 and 13 days for both species. Pre-oviposition was 1.45 ± 0.15 and 4.86 ± 0.23 days, oviposition was 3.1 ± 0.29 and 7.14 ± 0.67 days and post-oviposition was 8.2 ± 0.93 and 1.95 ± 0.35 days of *H. zea* and *H. armigera* respectively. The average number of eggs per female and percentage of egg hatch were 330 and 94 and they were not significantly different between species. These results provide for first time biological studies comparing *H. zea* and *H. armigera* in Argentina. This information could be important for the development of integrated management strategies of these species in South America.

Palavras-chave: Heliiothinae complex; growth; development

Apoio institucional: ANPCyT, FONCyT, MINCyT, (grants PICT/2015 No. 3109), EEAOC, CONICET

Filiação institucional: 1Instituto de Tecnología Agroindustrial del Noroeste Argentino, Estación Experimental Agroindustrial Obispo Colombres, Consejo Nacional de Investigaciones Científicas y Técnicas (ITANOA-EEAOC-CONICET), Av. William Cross 3150, Las Talitas 4001, Tucumán, Argentina. E-mail: gmurua@eeaoc.org.ar 2Estación Experimental Agroindustrial Obispo Colombres (EEAOC), Av. William Cross 3150, Las Talitas 4001, Tucumán, Argentina. 3Embrapa Soja, Rodovia João Strass, s/n, Acesso Orlando Amaral, CP 231, 86001-970, Londrina, PR, Brazil.