RESUMO SIMPLES - ECTOPARASITOS: SISTEMÁTICA, EPIDEMIOLOGIA E CONTROLE

EVALUATION OF THE ACTIVITY OF THE GROWTH DISRUPTOR TEFLUBENZURON AGAINST CTENOCEPHALIDES FELIS FELIS

Ramon Da Luz Bezerra (ramon.bezerraa@gmail.com)

Clara Rodrigues Dutra (clarardutra@ufrrj.br)

Vinícius Monteiro Ferreira (viniciusmfmonteiro@gmail.com)

Ygor Henrique Da Silva (ygorhenrique97@hotmail.com)

Iury Tauã De Souza Vieira (iurytau@outlook.com)

Diefrey Ribeiro Campos (diefrey8@gmail.com)

Thaís Ribeiro Correia Azevedo (thaisrca@gmail.com)

Luana Morais Izidoro (lumoraizi0@gmail.com)

Nayara Araujo Rosa (Nayaraar.rosa@gmail.com)

João Marcelo Moreira Homaissi (marcelo.joao0@gmail.com)

Fleas are among the most significant ectoparasites that affect vertebrates. The relevance of these insects lies in their ability to act as vectors for various pathogenic agents, in addition to causing hypersensitivity reactions in their hosts. The cat flea (Ctenocephalides felis felis) stands out as one of the most prominent and widely distributed species worldwide. These insects are strictly hematophagous in the adult stage, relying entirely on blood for their survival and reproduction. Currently, control strategies primarily employ growth

disruptors, aimed at interfering with larval development, egg hatching, and the formation of new adults. Continuous research in this area is essential to expand the range of control tools available on the market, seeking innovations to combat parasite resistance, reduce chemical concentrations, and maximize overall management effectiveness. The objective of this study was to evaluate the activity of the growth regulator teflubenzuron on eggs and larvae of C. felis felis. Both flea stages originated from the colony maintained at the Clinical Research and Technological Innovation Center in Veterinary Medicine (DPA–IV–UFRRJ). The parasites were exposed, after drying under a fume hood for 2 hours, to 2 grams of larval substrate impregnated with 200 µL of each solution, placed in disposable Petri dishes at the following concentrations: 0.005, 0.01, 0.05, 0.1, 0.5, 1, 5, 10, 50, and 100 µg/mL, in addition to a control and a placebo group. The test was performed in sextuplicate with 10 specimens per plate. After exposure, the material was incubated in climate-controlled chambers with controlled temperature and relative humidity (27 ± 1°C; 75 ± 10%). The larvae were monitored on day 14, and adult emergence was evaluated on day 28 according to the emergence index (EI) In the egg treatment, the EI was 19.4, 19.4, 35.5, 51.6, 41.9, 16.7, 29, 96.8, 100, and 100%, respectively. When the treatment was applied to larvae, the EI values were 15.8, 13.2, 5.3, 23.7, 0, 21.1, 23.7, 68.4, 100, and 100%. The present study demonstrates the efficiency of teflubenzuron in inhibiting the emergence of C. felis felis during immature stages and highlights the importance of developing research aimed at reducing the impacts of improper chemical use and the resistance of these organisms in ectoparasite control.

Palavras-chave: benzoylphenylureas ;fleas ;bioassay.