P021

Thiamethoxan in cyst of spermatozoa in Apis mellifera *black-eyed pupae*

Jane Moreira, Maria Izabel Camargo Mathias, Vinicius Araujo, Jose Lino-Neto

Applications of insecticides to control insect pests in Brazilian agriculture affect directly bees. In these social insects, spermatozoa are transferred from the testes to the seminal vesicles in bundles containing spermatozoa involved in glycoprotein capsule. In the seminal vesicle, spermatozoa are individualized during the sexual maturation process and are transferred during copulation to the female. In *Apis mellifera* the bundles are composed of 64 spermatozoa and in this work we performed tests bioassays to analyze if sublethal doses of thiatometoxan has affects on bundles in black-eye pupae. Twenty black-eye pupae were taken from healthy hives in apiary of the Department of Biology, UNESP, Rio Claro, São Paulo, Brasil had been their abdomen immersed for 5 minutes in the insecticide thiamethoxam diluted in water in concentration of 0.025% of LD50 established by [1] and methodology of contact according to [2]. Ten male individuals are used how control and his abdomen are dissected and had been immersed in water for 5 minutes. After, they were transferred to sterile polystyrene plates and were kept in BOD for 24 hours and their testes dissected according to histology routine technique. Cysts containing 64 sperm were unaffected by the insecticide application. The glycoprotein capsule that holds them together cysts also did not change for the thiametoxan concentration. Other insecticides are being tested in bees at the Department of Biology, UNESP to evaluate possible changes in spermatogenesis. According studies with natural product (like neem) results showed that this product not promote the morphological changes in testis cells in male of stingless bees [1] D.A. Tavares, (2011). Magister scients thesis UNESP, Rio Claro [2] R.O. Drummond et al., J Econ Entomol, v.66 (1973).