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Rearing Africanized honey bee (*Apis mellifera* L.) brood under laboratory conditions

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ABSTRACT. We developed a method for rearing larvae of Africanized bees under laboratory conditions to determine the amount of diet needed during larval development to obtain a worker bee. We started with larvae 18-24 h old, which were transferred to polyethylene cell cups and fed for five days. We found that the amount of diet needed for successful larval development was: 4, 15, 25, 50, and 70 µL during the first to fifth days, respectively. The survival rate to the adult stage was 88.6% when the larvae received the daily amount of diet divided into two feedings, and 80% when they received only one feeding per day. The adult weight obtained in the laboratory, when the larvae received the daily amount of diet in a single dose, did not differ from those that were developed under field conditions (our control). All adults that we obtained in laboratory appeared to be normal. This technique has the potential to facilitate studies on brood pathogens, resistance mechanisms to diseases and also might be useful to test the impacts of transgenic products on honey bee brood.

Key words: Africanized bee; *Apis mellifera*; Larval rearing; *In vitro* method

