

Differences between the quality of strawberries (*Fragaria x ananassa*) pollinated by the stingless bees *Scaptotrigona* aff. *depilis* and *Nannotrigona testaceicornis*

A.C. Roselino, S.B. Santos, M. Hrcir and L.R. Bego

Departamento de Biologia, Universidade de São Paulo,
Ribeirão Preto, SP, Brasil

Corresponding author: A.C. Roselino
E-mail: acr@aluno.ffclrp.usp.br

Genet. Mol. Res. 8 (2): 539-545 (2009)

Received December 12, 2008

Accepted January 26, 2009

Published May 12, 2009

ABSTRACT. We investigated the success of two stingless bee species in pollinating strawberries in greenhouses. Three greenhouses and one open field area were used; one greenhouse had only strawberry plants (control), another (G1) had three colonies of *Scaptotrigona* aff. *depilis* and another (G2) had three colonies of *Nannotrigona testaceicornis*. In the open field area, the flowers could be visited by any bee. The total production of fruits was counted and a random sample (N = 100) from each area was used to measure weight, length, circumference, and achenes number (N = 5). The percentages of deformed strawberries were: 23% (no bees); 2% (greenhouses with bees) and 13% (open field). The strawberries from the greenhouse with *N. testaceicornis* and the open field were heavier than those from the greenhouses with no bees and with *S. depilis*. The fruit circumference was largest in the greenhouses with

bees. The achenes number did not differ among the experimental areas. The strawberries produced in the greenhouses with stingless bees had more quality and greater commercial value than the fruits produced in the open field area and the greenhouse without bees. We conclude that stingless bees are efficient pollinators of strawberry flowers cultivated in greenhouses.

Key words: Stingless bees; Pollination; Greenhouse; Strawberry