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INFLUENCE OF COVERED BOXES OF PINE AND EUCALYPTUS *FSC* CERTIFIED TILES WITH PET AND ECOLOGICAL FIBROAMIANTO TEMPERATURE CONTROL IN *Apis mellifera* AFRICANIZED

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INTRODUCTION

Bees have one of the most complex organizations from the social insects, have an important feature, the ability to control the microclimate of the nest. The colonial thermoregulation can occur by mechanisms behavioral and physiological mechanisms. If they can not maintain proper temperature inside the nest have a drop in population, the larvae causing death.

The facilities must be planned so as to provide the best possible conditions for thermal comfort. One such technology is used tile pet ecological offers greater thermal comfort is a cheap and ecological alternative to cover boxes of bees to replace the traditional tile fibroamianto, whose processing is toxic and harmful to the health of industrial workers and the environment .

OBJECTIVE

To assess the influence of the coverage of the case temperature.

MATERIALS AND METHODS

Beekeeping in the sector of Iguatemi Experimental Farm, near a eucalyptus plantation and native forest, housed in the presence of shadows.

We used 16 standard boxes, Langstroth model, as follows: eight boxes of pine wood, of which four tile-covered fibroamianto (five mm thick) coated PET and four and eight boxes of eucalyptus wood, with coverage of these four fibroamianto tile (five mm thick) and four coated PET, arranged in parallel and zigzag alternating between the tiles

POINTS OF CONTACT BOXES INSTALLED IN ECOLOGICAL PET

The tile was built by a PET square timber measuring 70 x 85 cm covered first with tetra pak milk cartons (material: polyethylene, aluminum and paper), and open to the aluminum part facing the sun and above this coverage, PET bottles cut approximately 30 cm wide and 18 cm long cylindrical in its central portion, the material was stapled into the wooden square.

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We made a total of 10 data taken every 9 hours with 1 hour interval between them three points of the box (in a box under the tile and the tile).

RESULTS

Average temperature for the material of the box.

Material box	Temperature
Pine	20.3226042 ± 0.1648999
Eucalyptus	20.2686343 ± 0.1484988

Average temperature for the type of tile.

Material tile	Temperature
Pet ecológica	20.2670833 ±0.1638476
Fibroamianto	20.3241551 ±0.1496578

Average temperature in relation to sensor location

Sensor	Temperature
Internal	22.1525174 ± 0.1865603
Under tile	19.2914583 ± 0.0782559
About tile	19.4428819 ± 0.2279146

CONCLUSION

It can be concluded that there were no differences in temperature in relation to the housing material used, but the locations of sensors and control is an internal temperature of the box by the bees. There was no difference between the types of tile used in relation to temperature, PET can replace the tile fibroamianto tile, the tile is an inexpensive alternative pet ecological and environmental boxes of bees to cover and further processing of the tile and be harmful fibroamianto toxic to the health of industrial workers and the environment.

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