



IMPACT OF COMB AGE ON SOME ACTIVITIES OF HONEYBEE COLONIES

BY

Sahar Gaber Ibrahim Abd El Salam

B.Sc. Agric. Entomol. Kafr El-Sheikh

University, 2006

THESIS

Submitted in partial fulfillment of the

Requirements for the degree of

Master of Science

In

Entomology

Department of Economic Entomology

Faculty of Agriculture Kafr El-Sheikh

University

2020

ABSTRACT

This study was carried out at Apiary of the Faculty of Agriculture, Kafr El-Sheikh University during the period from February 2017 to February 2018. Eighty four different combs age from 1 to 7 years old were distributed in twelve colonies each have seven combs, colonies headed by young sister queens . The samples were taken from the center of each comb and compare with the standard sample taken from comb wax built without foundation wax. The result showed that weight of comb, exuviae and height base of the cell were positive correlated with age of comb. Also the cell diameters, depth of cell and volume of the cell were negative correlated with age of comb. Weight of the newly emerged workers and all morphological characteristics were negatively correlated with age of comb.

The Area of mandibular gland, acini in Hypopharyngeal glands (HPG) and area of the second wax gland were negatively correlated with the age of comb.

for brood production results showed that brood production differed and significantly affected by comb age, the largest worker sealed brood area was recorded in new combs compared with old combs. Also the weight of honey yield was significantly negative correlated with the age of comb.

The largest mean area of drawing the foundation wax recorded in colonies fed twice a week compare with colonies fed once a week, the largest area of built workers cells recorded in May and June and the largest area of built drone cells was recorded in late March to mid-April.

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