

# **Comparison study of comb foundation on Sudanese honeybee colonies.**

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## **Abstract:**

Nine Sudanese honeybee colonies in Langstroth hives with comb-space 32.0mm and bee - space 5.47mm, were kept in Khartoum State during the period of maximal population growth, October/2003 to April/2004. Each colony started with 5 combs full of bees, without brood or stored food. They were divided into three groups using different types of comb foundation compared with bees in empty hives without comb foundation: group A was provided with Sudanese wax foundation sheets 32 cells/in<sup>2</sup>; group B was provided with imported wax foundation sheets 25 cells/in<sup>2</sup>; and group C with wired frames without foundation.

Group A accepted the foundation and produced greater amount of honey. Group B rejected imported wax foundation, they built few combs for drone and honey storing and built burr combs for worker rearing. Colonies without comb foundation reared significantly higher amount of drone brood. Groups A and C showed complete colony settlement (100%), while groups B settled 66.60%. Results of brood rearing activity, population density, pollen collection, honey stored and morphometric study are also given.

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