

# **Sugar syrup as substitute for nectar: Effect on production and density of the honey bee *Apis mellifera Adansonii* (Hymenoptera: Apiidae) in artificial beehive**

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## **Abstract**

The effect of sugar syrup on colonies of *Apis mellifera Adansonii* (Hymenoptera: Apidae), in an apiary at University of Lagos, was studied and the colonies were monitored between Nov. 2001 and Oct. 2003. During this period, sugar syrup was administered as nectar substitute to Colonies A and B colonies C and D which lacked sugar syrup served as controls. In the 1st dry season (Nov.2001 – Apr. 2002), the production of colonies A and B were 35.0 kg and 30.5 kg and their population densities were 24,610 and 22,727 respectively, while the production of colonies C and D were 37.0 kg and 40.5 kg and the population densities were 27,040 and 29,790 respectively. In the 1st wet season (May 2002–Oct. 2002), colonies A and B weighed 24.5 kg and 22.5 kg, respectively, while their population densities were 25,360 and 23,810 respectively, Colonies C and D weighed 22.5 kg and 24.0 kg and their population densities were 15,846 and 22,500, respectively. Colonies A and B weighed 42.5 kg and 39.0 kg and had population density of 34,770 and 33,240 respectively in the 2nd dry season (Nov. 2002) – Apr. 2003). Colonies C and D had comparatively lower production (29.5 kg and 35.5 kg) and population densities (25,592 and 31,634 respectively). This study showed that administration of sugar syrup to colonies of *A. mellifera Adansonii* in wet season sustained more population of bees for foraging activities in the 2nd dry season. This significantly increases population and production in colonies A and B in the 2nd dry season.

**Keywords:** *Apis*, Heavy metal, *mellifera Adansonii*, Beehive

**ISSN:** 0331-0094

**Published:** In 2007