Studies on artifical feeding in honeybee colonis

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The nectar and pollen grains are the basic nutrition for honey bees. When these sources are lacked or not available, the beekeeper has to find another nutrition replacement which is sugar solution and Pollen substitutes.This study demonstrated this by choosing four diets and using them as a pollen substitutes which are not expensive and available in the local market. These pollen substitutes are (Soybean flour - Wheat Germ - Dried Brewer’s yeast - Palm Date). Melting these pollen substitutes with the honey as 2:1 v/v (except Palm Date is being melted with the sugar as 2:1) and studying their effect on the different honey bee activities shown below:1 - Brood rearing.2 - Pollen gathering.3 - Queen cups building.4 - Pollen substitutes consumption.5 - Hypopharyngeal gland development.6 - Biometrical characters of wax mirror.7 - Longevity.The study carried out at Mit Ghamr city, Dakahleya Governorate. On Fifteen honey bee colonies, of about equal strength and supplied with mated hybrid new Carniolan queens. These colonies have been divided into five groups, and each group has been divided into three replicates. These colonies haveSummary- 108 -been treated with the above mentioned pollen substitutes in addition to feeding sugar solution in the hive (1:1 w/w) at seven days intervals during the dearth periods of nectar. Except ”Control” treated with the sugar solution only. This experiment ran for two successive years 2003-2004 & 2004-2005.1 - Brood rearing:•The study results showed that the colonies treated with the Wheat Germ came in the highest level as it gave the highest worker broad area within the two years, then the Dried Brewer’s yeast came in the second rank, then Soybean flour in the third rank, while the Control in the fourth rank, and the Palm Date came in the last rank. As the grand total of sealed broad area in the first year was 6847, 6210, 5291, 4475.33 and 4202 inch2 for all previous treatments in sequence, while the grand total of sealed broad area in the second year was 7132.67, 5995.67, 5598.67, 4358.33 and 3807.67 inch2 for all previous treatments in sequence.•The best broad rearing period was the Spring within the study years as the total of sealed broad area in the first year for the Soybean flour, Wheat Germ, Dried Brewer’s yeast, Palm Date, and Control was 1806.33, 2471, 2099, 1538 and 1590.67 inch2, respectively. While the readings of the second year were 1912.33, 2538.33, 2130.33, 1404 and 1667 inch2 for each of the previous treatments, respectively.•The lowest broad rearing period was the Autumn within the study years as the total of sealed broad area in the first year for the Soybean flour, Wheat Germ, Dried Brewer’s yeast, Palm Date, and Control was 1051.33, 1197.67, 1192,