



University of Zabol

Graduate school

Faculty of Agriculture

Department of Animal Science

The Thesis Submitted for the Degree of M.Sc (in the field of Animal
Science)

Title:

Determining the percentage of inbreeding in the concentration areas of
bee breeding in Sistan and Baluchistan province and its effect on the
amount of honey produced

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Abstract

Given the importance of homozygosity of sex alleles or inbreeding on honey yield and production, the aim of the present study was to evaluate the level of inbreeding in apiaries of Sistan and Baluchestan province based on the apiary aggregation centers and beekeeping potential, the number of colonies and beekeepers. For this purpose, colonies with queens of the same age and with the same population (preferably more than seven times the population) were selected completely randomly from the apiary aggregation centers in different regions of the province and were subjected to field studies. The results showed that the lowest inbreeding coefficient (2.89%) was observed in Ismail Abad district, Khash county. Also, Delgan County had the highest honey production (12.07 kg per hive), but the amount of honey produced in Habib Abad District, Taftan County was the highest at 18.79 kg per hive compared to other districts. The higher honey production in Habib Abad District, Taftan County could be due to more suitable regional conditions or better nutrition of honey bees in this district compared to other districts. The correlation between the percentage of inbreeding and the honey production trait was significant. Therefore, in order to reduce the performance of colonies, it seems very necessary to control inbreeding in colonies.

Keywords: Inbreeding, Honey Production, Homozygosity of Sex Alleles of Honey Bees