8th INTERNATIONAL MUĞLA BEEKEEPING & PINE HONEY CONGRESS

The Effect of Climate Change on Beekeeping Future: Türkiye's Case within MediBees Context

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Abstract:
This is an international scientific collaboration initiative launched as Medibees project which investigates the effects of global warming and climate change on beekeeping in countries neighboring the Mediterranean. Partner countries are Türkiye, Spain, Italy, Portugal, Malta, Algeria, Jordan and Lebanon. The United Arab Emirates, Egypt, Iran, Chipre and Greece have partial participations.

The objectives of this study are to thoroughly investigate the genetic background of various subspecies of honeybees native to the Mediterranean region. Additionally, the research aims to gain a deeper understanding of how these honeybee subspecies have adapted to the specific environmental conditions found in the Mediterranean area. Another goal is to evaluate the resilience of these bees in the face of climate change. By exploring these areas, the study seeks to gain insights into the genetic makeup and adaptability of Mediterranean honeybee subspecies to their natural habitat, as well as to determine how well they can withstand the ongoing and future impacts of climate change.

The aim is to map the genetics of the different Apis mellifera subspecies across the countries that are taking part in the study. This involves identifying specific genetic traits that enable these subspecies to adapt effectively to the unique Mediterranean environments they inhabit. By understanding these genetic adaptations, the project seeks to promote these local Mediterranean subspecies and ecotypes within the beekeeping communities found in these participating countries.

The goal is to encourage the adoption and support of these local subspecies among local beekeepers, thereby fostering a more sustainable and regionally adapted beekeeping practice. This effort aims to ensure that the traits beneficial for survival and productivity in Mediterranean climates are recognized and utilized to their fullest potential, offering advantages to both the bees and the beekeepers who rely on them.

In this context, as with other partners, field and laboratory trials were conducted in Turkey, divided into regions by bee subspecies. Samples of honey bees, honeys plants, and hive bottom boards were collected for different tests and analyses.
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