APIMONDIA SCANDINAVIA 2025
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PP-455 [Bee Biology]

APIMONDIA SCANDINAVIA 2025
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Selection of Varroa-resistant honeybees in central eastern Argentina. 15 years' experience

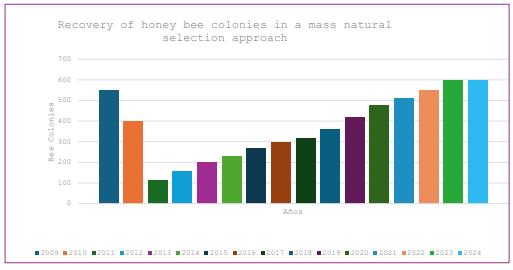
Loiseau Marcelo / [1] Miel Loiseau

Introduction

Two basic concepts separate current beekeeping from what we knew in the past: Varroa and artificial feeding. Producing honey again in a sustainable way and without contaminants was the motivation behind this experience. In this sense, the objective of this development was to obtain bee populations that could sustain themselves without varroa treatment and, at the same time, be productive in a commercial approach.

Material and methods

The experience began in 2009 with 550 productive hives located in 10 different apiaries in the central-eastern area of Argentina, Department of Islas del Ibicuy in Entre Rios province and district of Magdalena, in Buenos Aires province. The method was the suspension of all forms of mite control (synthetic or organic acaricides, biological or thermal control), and no artificial or proteins feed were added it.



Results

In the spring of 2011, the second year without treatment, 80% of the colonies were dead, leaving only 116 alive. For repopulation, we decided to use the capture of swarms, which showed a high survival rate when found in natural hive conditions.

During the first 6 years, we installed in two different ways: 1- offer the swarms the possibility of building natural nests in spaces formed by 2 Langstroth supers nailed together without frames or stamped wax, trying to replicate natural conditions. And 2- swarms were installed in standard Langstroth material with the difference that empty frames were interspersed, without stamped wax, so that they could freely make their combs. In the sixth year, it was decided to continue only with Langstroth material, given that the similarity of winter survival was confirmed between hives with natural nests and swarms that were captured and installed in Langstroth material.

Discussion:

After 15 years of experience, we have more than 600 hives, which have never been treated with acaricides, and are maintained exclusively with the honey and pollen collected by them, with winter mortality rates close to 25%. This production method can be certified by the absence of residues.

1 The apiaries of Miel Corapi are part of the Scientific and Technological Research Project PICT-2021-I-A-01100 entitled 'Dynamics of the mite-virus relationship in honey bee populations with different degrees of susceptibility to *Varroa destructor* in the Argentine Republic' (RESOL-2023-31-APN-DANPIDTYI#ANPIDTYI), directed by Dr. Francisco Reynaldi (CEMIBA FCV UNLP – Argentina) and Dr. Matías Daniel Maggi (IPROSAN FCEyN UNMdP – Argentina).

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Carlos Marcelo Loiseau
Miel Corapi - Buenos Aires - ARGENTINA

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