

AGRO-ECO-BIOLOGICAL (AEB) BEEHIVES FOR BEEKEEPING IN THE SAHARA, MOROCCO

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INNOVATION

Agro-Eco-Biological (AEB) beehives combine traditional terracotta hive with wooden elements to increase both honey yield and the well-being of bees.

To increase longevity of the traditional terracotta hive, cactus slime is added for reinforcement during manufacture.

The use of an endoscopic camera in the hive keeps stress levels in the bee colony to minimum.

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Abderrahmane Ait Hamou is a Moroccan agricultural engineer. Among other things, he has worked as the Head of Agricultural Production Service at the Provincial Direction of Agriculture in Kelaa Sraghna, Morocco, and as a

consultant coordinator on behalf of AMABIO, the Moroccan organic producers' association in a Swiss Cooperation Project on Organic farming in Morocco. He has helped set up pilot organic farms with focus on beekeeping, aromatic and medicinal plants, as well as livestock.

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DESCRIPTION

The AEB beehives combine the traditional terracotta hive with a modern, roomier wooden hive body and frames which have a trapeze form in cross section. The terracotta entrance gives good thermal insulation against heat and cold in the hot arid mountainous region of Askonber in Morocco. The innovative design enhances the well-being of the bees and they produce more honey.

The use of an endoscopic camera helps reduce stress in the colony during inspections.



A craftsman producing the hive

In addition to the endemic plant *Euphorbia resinifera*, fruit tree saplings of carob, acacia, cactus and almond have been planted in the project area to achieve a nearly year-round flowering season to feed the bees.

RELEVANCE

Bees are on the decline worldwide. The project utilizes the local, native Saharan bee, *Apis mellifera sahariensis*, which has proven to be robust, and not prone to attacks from varroa mites.

Rural youth trained in beekeeping will gain an additional source of cash income. Customers are encouraged to harvest their own honey as a novel marketing idea to sell the produce.

The innovative hive design is an improvement on the traditional design, it uses local materials and engages local craftspeople.



Young trainee beekeepers planting bee plants