LOCATION

Poland

PARTNERS

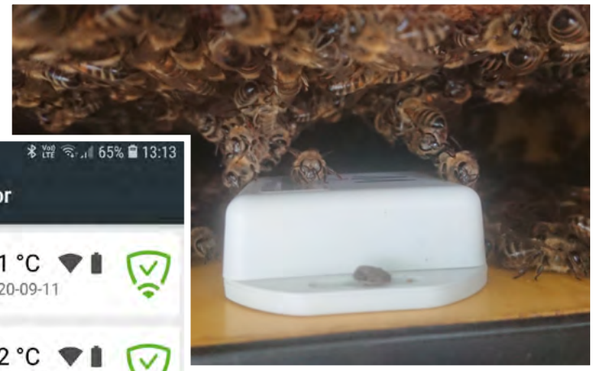
5.3 Pollination Optimisation in Apiculture

CHALLENGE

Honeybees, mainly Apis mellifera, remain the most economically valuable pollinators of crop monocultures worldwide. Yields of some fruit, seed and nut crops decrease by more than 90% without these pollinators (Klein, 2007). Thus, pollination is the highest agriculture contributor to yields worldwide, contributing far beyond any other management practice (Why bees matter, FAO, 2018). The challenge is to protect the honeybee to ensure pollination services for crop production. However, there is a lack of detailed information regarding the field saturation of pollinators and a lack of integrated control on pollination.

AIM

This pilot aims to develop and provide a service for pollination optimisation. The service will connect farm management systems and apiary management systems with advisory and decision support services. The goal of the integration of different agriculture systems is to enable better communication between farmers and beekeepers, to protect bees and to optimise pollination of crops with the aim of improving their yields.



HOW

In this pilot, the eDWIN[1] Virtual Farm is connected with the apiary management system, ControlBee, to manage beekeeping information, including apiaries and farming activities like planned sprayings (based on the information from farmers). Existing systems will be improved with new functionality, enabling collaboration without needing to use a new system. Moreover, as part of the project, existing sensors will be improved, and new apiary sensors are developed to allow remote monitoring of mobile apiaries.

BENEFIT

Benefits will include improved yield and quality of crops for farmers and better gains for beekeepers. It will also deliver better control and management of pollinators and result in better communication between farmers and beekeepers (e.g. notification of the start of flowering of plants). Using DEMETER enhanced services will enable easy integration of the apiary management system with multiple and potentially different farm management systems.

[1] eDWIN is a nation-wide farm management IT system for plant protection, being developed as part of a national project in Poland.