

## The challenges of monitoring honey bee (*Apis mellifera*) losses.

Bee keeping is facing serious difficulties throughout the world. Deaths of honey bees appear to have been rising for a number of reasons, including from so-called Colony Collapse Disorder, which has been reported in the United States and, more controversially, in Europe, as well as elsewhere.

Apiculture has been practiced in Europe for thousands of years and is an integral part of Europe's cultural and agricultural heritage, benefiting the ecosystem generally and the agricultural ecosystem in particular. More than 76% of the food produced for human consumption depends on the bee keeping sector and 84% of vegetable species grown in Europe depend on pollination (European parliament resolution B6-0000/2008). But it's not just humans who depend on honey bees. Wild terrestrial ecosystems also need pollination to survive.

Despite the importance and long history of bee keeping, establishing exactly how many colonies are dying and why is difficult. A lack of historical data makes it hard to establish trends. There are a number of psychological, behavioural and economic factors which influence bee keepers too, affecting the information they are willing to provide on the state of their colonies and making it even harder to paint a true picture of honey bee losses and their causes.

Research by LeeMax Director, Bernice Lee, describes some of the known and understood afflictions of *Apis mellifera* (Western honey bee) and examines what is currently known about reported cases of bee deaths in Europe. The research emphasises the need for a honey bee monitoring system and examines the human factors and difficulties involved in doing this.