

Belgium

Belgian beekeeping situation and the symptomatology as discriminatory tools

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In Belgium we estimated the numbers of beekeepers to be 8600 but only 2000 beekeepers are currently registered. There is no professional beekeeper in Belgium. The mean number of hives in apiaries is 14. Each two years we are conducting a survey on almost 5% of the registered beekeepers in the south part of Belgium. We visited each apiary, we collected samples of honey, pollen, beebread, wax and honey bees and we studied the potential risk factors by molecular, microscopic, microbiological and chemical analysis. In the apicultural season 2004 – 2005, the mortality rate in apiaries ranged from 0 to 84.2%. The global mortality rate was 16.37%. The mortality occurred between October and April in 92.86% of the cases. In the apicultural season 2006 – 2007, the mortality rate was lower with a percentage of 7.3%. Most of the collapses were still observed in the winter. Great many symptoms were recorded in apiaries and they were not the same in every apiary. These observations confirmed the multifactorial aspect of the honey bee mortality. Symptoms did not allow identifying precisely a cause of the mortality because many symptoms are not specific. Moreover a lot of diseases are asymptomatic. Therefore we analyzed samples in the laboratory and we identified different potential causes. We have identified *Varroa destructor* and associated viruses, the lack of food in the winter and the American foulbrood at the clinical stage. During the season 2007 – 2008, few beekeepers have suffered massive mortality in Belgian apiaries. It is likely that the communication campaign in Belgium about the importance of *Varroa destructor*, the presence of virus, the lack of food in the overwintering colonies allowed limiting their negative effect on the honey bee mortality rate. Currently, laboratories in the north part and south part of the country are collaborating to work out a national strategy to control *Varroa destructor*.