

PRESENCE OF SIX BEE VIRUSES IN APIS MELLIFERA L. POPULATIONS IN WALLONIA (BELGIUM)

J. Mignon, C. Snoeck, B. Kim Nguyen, E. Haubruge

Department of functional and evolutionary entomology, Gembloux Agricultural University, Gembloux, Belgium

A survey of six bee viruses was conducted by RT-PCR techniques. Samples of adult bees were collected from 36 wallonian apiaries in autumn 2006. In each apiary, two colonies were sampled. The virus detection technique used was RT-PCR. The technique was preliminary adapted to each virus by changing some polymerase chain reaction parameters. The sequencing of interesting fragments made it possible to validate the method only for four viruses. Virus presence, number of phoretic varroas and winter mortality were linked up through statistical analyses. In adult bees, black queen cell virus (BQCV) was found in 75% of the apiaries, sacbrood virus (SBV) and chronic bee paralysis virus (CBPV) in 69% of the apiaries, deformed wing virus (DWV) in 64% of the apiaries, Kashmir bee virus (KBV) in 47% of the apiaries and acute bee paralysis virus (ABPV) in 8% of the apiaries. The six viruses were found in Wallonia mostly without clinical signs and multiple infections are frequent. None of the tested apiaries was free of viruses. Moreover, the number of viruses per colony is highly correlated with the number of varroas. There is a significant correlation between the number of viruses and mortality, as well as between the number of varroas and winter mortality.

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