

Sixth European Conference of Apidology



Murcia (Spain) 9 -11 September 2014



number of colonies per beekeeper were the only common characteristics at European level. The tremendous variation in European apicultural industries has implication for any comprehensive epidemiological or economic analysis of the industry. This variability needs to be taken into account for such analysis and for future policy development. The industry would be served if beekeeping registration was uniformly implemented across member states. Better information on the package bee and queen production would help in understanding the ability of the industry to replace lost honey bee stocks.

Feeding sugar syrup and sugar candies with high levels of HMF (Hydroxy methyl furfural) is bad for honey bee vitality

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Feeding honey bees artificial carbohydrates is an important part of conventional and organic beekeeping management. These feeds can influence honey bee colony vitality. Enzymatic processing of artificial feed can result in different end products when compared to the breakdown products resulting from bees breaking down natural feeds. These products could have a negative effect on bee health. One breakdown product of particular concern is HMF. For this reason there is a need to standardise HMF (*hydroxymethylfurfural*) quantification methodologies. Using data obtained from previous feeding studies, we used the Winkler quantitative analysis to quantify HMF levels in products for feeding the bees before they were used. Our results found that levels of HMF in stored bee feed regularly exceeded the levels that are considered tolerable in honey. In one case that levels HMF were measured at e 222, 5 mg/kg. It is unclear what effect this level of HMF will have on bee health. Further studies quantifying negative effects are badly needed. If these levels do have a demonstrable negative effect we propose that concentrations of HMF should be required on the labelling of all bee feeds. Such labelling should standardized and include recommendations for product storage and use.

Deformed wing virus and variation of polyprotein gene sequences in Lithuanian honey bees

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Pathogenic honey bee viruses have recently aroused particular interest as they are