Winter honeybee losses cut in half since 2012 as beekeepers battle deadly varroa mite

It looks as though the period of alarmingly high winter mortality in honeybees is over. And a long-term study by Wageningen and Leiden [universities] suggests there is no clear cause of other bee deaths. Seven questions about bees, varroa mites and neonicotinoids.

Why were so many bees dying?

According to bee researcher Bram Cornelissen, average winter mortality was about three per cent until 1983. That was the year that the infamous varroa mite made its appearance. This insect parasitizes bees and can cause a whole colony to collapse. From the start of this century winter mortality assumed alarming proportions, not only in the Netherlands but worldwide. In the winter of 2009-2010 around 29 per cent of the colonies did not survive into spring.

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Another important point is that there is no smoking gun: no single cause of mortality has been found. Various factors play a role: parasites such as the varroa mite, chemical pesticides, fragmented landscapes. What does increase bee colonies' chances of surviving the winter, is good control of the varroa mite.

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And what about neonicotinoids?

Residues of chemical pesticides were found in about 30 per cent of the bee colonies in the study, and in 12 per cent these were neonicotinoids, but there is no correlation with winter mortality. And anyway, in 2013 the use of the three most important 'neonics' …. was banned on crops that bees feed on, and a total ban was introduced in 2018.

While the study reveals no noticeable effects of neonics, this does not mean that they have no effect, says [Cornelissen]. 'There are enough studies in both lab and field that do show that neonicotinoids affect bees. But no studies demonstrate a correlation with winter mortality. His colleague Tjeerd Blacquière, also a bee expert …. is more outspoken. 'The role of neonicotinoids is always exaggerated. In all the years that the debate has been going on, many beekeepers' colonies have not died. I've never had a colony collapse during the winter. It's a question of careful beekeeping.'

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So how come winter mortality has halved since 2012?

There’s no clear answer. Experts in Wageningen attribute it to beekeepers’ improved understanding,which has resulted in more effective control of the varroa mite ….

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