

Honeybees entomb to protect from pesticides

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(PhysOrg.com) -- With the drastic rise in the disappearance of honeybee colonies throughout the world in recent years there has become a large focus on the study of honeybees and the effects of pesticides on their colonies. Termed 'colony collapse disorder' in 2006, the decline in honeybees throughout the world has been attributed to everything from pesticides to disease and parasites. The loss of the honeybee population is a concern for the agricultural community, given these bees are responsible for pollinating crops worldwide.

Dr. Jeffrey Pettis, head of the Bee Research Laboratory with the US Department of Agriculture recently addressed the All-Party Parliamentary Group on Science and Technology in Agriculture in England to discuss his recent study on the honeybees.

Pettis has found that the bees are apparently able to detect the pesticide residue found in [pollen](#) they bring back to the hive. In examining honeybee hives, they have found cells containing pollen with high levels of pesticide have been sealed off by the bees using a waxy substance called propolis. While these bees are able to sense the contaminated pollen and try to seal it off from the rest of the hive, Pettis says this attempt is only proving futile and that the findings of sealed off cells in a hive are the biggest indicator of probable colony loss.

Pettis believes the decline in the honeybees can be attributed to what he calls the “3-P principle” which represents poor nutrition, pesticides, and pathogens. While the [pesticides](#) are a contributing factor to the decline, he does not believe they are the only factor. With the increase in more intensive farming of one crop, a honeybee’s food source in an area can go from that of multiple sources to only one source, leading to poor nutrition.

Beekeepers have also been using a substance to help control pests like the varroa mite that attacks honeybees. Unfortunately, the bees have also been found to entomb pollen cells they find containing this substance, showing that in may in fact also be harmful to the [honeybee](#).

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