

# Bees are 'sick of humans' but man will feel the sting

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A beekeeper inspects a brood frame inside a bee hive suspected of having been infected with the foulbrood bacterial disease on a farm near Durbanville, about 50 km from Cape Town

In a worrying development which could threaten food production, South Africa's traditionally tough honey bees—which had been resistant to disease—are now getting "sick of humans", with the population of the crucial pollinators collapsing, experts say.

The seriousness of the global problem was highlighted when US President Barack Obama announced a plan last month to make millions of acres (hectares) of land more bee-friendly.

Loss of habitat, the increasing use of pesticides and growing vulnerability to disease are blamed by many critics for the plight of the honey [bees](#).

The environmental group Greenpeace, which has launched a campaign to save the insects, says that 70 out of the top 100 human food crops, which supply about 90 percent of the world's nutrition, are pollinated by bees.

In South Africa, an outbreak of the lethal bacterial disease foulbrood is spreading rapidly for the first time in recent history, says Mike Allsopp, honey bee specialist at the Agricultural Research Council in Stellenbosch in the Western Cape province.

"It's exactly the same as around the world, the bees are sick of humans and the pressures and the stresses humans are putting on them," said Allsopp.

"In the past they were less vulnerable because they weren't stressed by intensive bee-keeping and pesticides and pollution."

The foulbrood hitting South Africa is the American strain of the disease, he said. The country's bees have previously coped with the European version.

The fear is that the disease could spread north through Africa, where hundreds of thousands of people work in small-scale bee farming, Allsopp said.

"It is a ticking time bomb. Every colony that I've looked at that has clinical foulbrood has died, and we're not seeing colonies recover."



A beekeeper blows smoke into a bee hive to calm the bees as he inspects the hive for the foulbrood bacterial disease on a farm near Durbanville, South Africa

When honey bee farmer Brendan Ashley-Cooper discovered foulbrood in his colonies in 2009, he knew the worst was yet to come.

"We thought we were going to have this major explosion of foulbrood," said Ashley-Cooper, a 44-year-old based in Cape Town. "I didn't know what to do, I didn't know what the extent of it was. I was just worried about the bees."

Six years later, the nightmare has come true for the third-generation

beekeeper as hives die off.

The state of South Africa's bees has never been as bad as it is now, he says.

## **Bees under siege**

Foulbrood attacks the bee larvae, leading to the collapse of the colony. It is spread when bees raid the dead colony, bringing back spore-infected honey to their colony, or by the importation of contaminated bee products.

While North America and Europe have battled foulbrood for centuries, South Africa's bees have stayed healthy—a resilience attributed to the country's diverse bee population, which has naturally fought off disease and pests in the past, as well as strict regulations that require any imported bee products to be irradiated.

Yet today the hardy South African bees are under siege. "Foulbrood has spread massively in the last five months, it has now spread over a 500 by 400-kilometre (about 300 by 250-mile) area where most beekeeping operations are infected," said Allsopp.

"It is growing rapidly and I can think of no reason why it will stop unless human intervention stops it or controls it."



A beekeeper holds a brood frame with a nest that has been infected with the foulbrood bacterial disease on a farm near Durbanville, South Africa

The stakes are too high for bee keepers to ignore, said Allsopp. "We cannot afford to lose our bee population, not because of the losses of honey, but because we have 20 billion rands (\$1.6 billion) worth of commercial agriculture that requires bee pollination."

Faced with the realisation that the bees can't adapt to the foulbrood threat fast enough to sustain agricultural pollination, South African officials say that they are in talks to introduce stiffer regulations to tackle foulbrood.

"There is a team that is currently working on an action programme that will be between industry and the department that will be announced in the next few weeks," said director of agriculture Mooketsa Ramasodi.

The government plans to clamp down on the registration of beekeepers, heighten awareness of the issue, and enforce beekeeping management measures—such as checking the larvae regularly—which are aimed at identifying the disease before it kills the colony, he said.



Diseased bee nests, contaminated hives and brood frames, infected with the foulbrood bacterial disease are piled up on a farm near Durbanville, about 50Km from Cape Town

South Africa would use antibiotics to treat hives—a controversial method—only as a "last option", Ramasodi said.

Ashley-Cooper worries that the government action may be too little too late for an industry that has a laissez-faire approach to beekeeping.

In general, South African [bee keepers](#) leave the bees to fend for themselves, confident that they will eventually recover, as they have always done in the past.

"It's really a beekeeper issue, it's about beekeeper education and becoming modern beekeepers," said Ashley-Cooper. "We are keeping bees like our grandparents did 150 years ago, there's huge room for improvement."

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