

## **In the Last three Months Alone, Pesticides Have Killed Some 500 Million Bees in Brazil**

*According to Agência Pública and Repórter Brasil, some 500 million bees have died in the last three months in four Brazilian states: 400 million in Rio Grande do Sul, 7 million in São Paulo, 50 million in Santa Catarina, and 45 million in Mato Grosso do Sul.*

By Xiu Ying, Contributing Reporter | May 10, 2019

RIO DE JANEIRO, BRAZIL – Earlier this year, a large scale of bee deaths was reported in southern Brazil due to pesticides used in soybean plantations. In Rio Grande do Sul, about 80 percent of bees are dying because of Fipronil pesticides, which are used in soybean farming.



Bee pollination work also indirectly affects other crops, such as soybeans.

This issue is even more serious and extensive, given that it has been occurring in other states of the country.

According to Agência Pública and Repórter Brasil, some 500 million bees have died in the last three months in four Brazilian states: 400 million in Rio Grande do Sul, 7 million in São Paulo, 50 million in Santa Catarina and 45 million in Mato Grosso do Sul.

This is an estimate by beekeeping associations, agriculture secretariats, and research conducted by universities. The cause of extermination, according to experts, is the species' contact with pesticides based on neonicotinoids and Fipronil, banned in Europe for more than a decade.

The ingredients contained in these pesticides are lethal to insects when sprayed, as they spread beyond the affected area.

Fipronil is an insecticide that acts on insects' nerve cells. When applied by aerial spraying, bees are directly exposed to it. An Embrapa survey, conducted in 2004, found that the method dispersed 19 percent of the sprayed pesticide to areas outside the area of application.

Neonicotinoid pesticides, on the other hand, have the potential of spreading throughout the entire plant. They are used in different crops: cotton, corn, soybeans, rice, and potatoes.

### **Pollination and agriculture**

As is well known, bees are pollinators of most of the planet's ecosystems. They are responsible for promoting the reproduction of various plant species. In Brazil alone, 60 percent of the 141 species of plants cultivated as food and animal production depend to some extent on pollination from bees.

On a global scale, this percentage rises to 75 percent, according to the Food and Agriculture Organization of the United Nations (FAO).

Beekeeper Salvador Gonçalves, president of the Beekeepers of Cruz Alta (Apicruz), municipality of Rio Grande do Sul, claims that poisons sprayed by airplanes in the morning cause bees to turn up dead in the afternoon.

Approximately 100 million bees were found dead in Cruz Alta in the last quarter alone. As a result, all the honey produced by insects was discarded by beekeepers for fear that the product may be contaminated with poisons.

### **What if the bees disappear?**

That would be planetary chaos. Embrapa's researcher and Insect Ecology doctor Carmem Pires explains that we would no longer consume various fruits or that these would become very expensive since the pollination work done by bees would have to be done manually by humans.

Bee pollination work also indirectly affects other crops, such as soybeans.

“In the case of soybeans, for example, an 18 percent increase in production has been noted. It is also important to highlight the chain effect. Plants need bees to form their seeds and fruits, which are food for many birds, which in turn are the diet of other animals. The death of bees affects the entire food chain,” explains the researcher.



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The roles of bees in a hive are very well delimited. The death of these pollinators through contact with pesticides can occur in several ways. The most common is when the worker bee leaves for pollination.

Some end up dying immediately, while others become disoriented and infected. The survivors try to return to the hive but they can either die on the way or infect the whole hive when they return. The result is that the entire swarm dies in just one day.

### **Now what?**

As a result of this blatant extermination of bees in the country, beekeepers' associations began to organize themselves. In Rio Grande do Sul, for example, agronomist Aroni Sattler issued 30 reports to beekeepers in the state confirming the contact of insects with pesticides. In possession of the report, they may appeal to the courts for compensation on their losses.

However, the agronomist points out that native wild bees are the most at risk of death, as there is no record of how many are dying.

“The impact of pesticide use reaches a range of three to five kilometers from plantations. Everything in its surroundings disappears,” he says.

Sattler also emphasized the lack of information on pesticide use:

“There are cases of mortality that occur due to farmers using agrochemicals incorrectly, or even by lack of information. They believe that bees damage crops so they spread the poison.”