## KILLING THE FLEAS AND THE BEES

## The Greatest Agricultural Apocalypse

By Deva Khalsa VMD

Bees play a vital role in our food supply as well as the health of the planet, and they are disappearing. What's causing this devastating loss, and are some pet owners inadvertently contributing to the problem?



f all the fleas disappeared off the face of the earth it wouldn't bother me much at all. I feel the same about ticks. But it's an entirely different story with bees.

Bees are the canary in the coal mine. Einstein is alleged to have said that humanity would only have four years once the bees were gone. Quite frankly, if the bees die off, we humans die off too.

Bees pollinate watermelons, strawberries, blueberries, blackberries, raspberries, apples, cherries, lemons, peaches, kiwi fruit and in fact just about every other fruit with the exception of pineapples,

grapes and bananas. Cucumbers, squash, tomatoes, peppers, eggplant, avocados and most peas and beans need bee pollination, while corn only needs wind. Cabbage, cauliflower, Brussels sprouts and collards need bees to be able to create new seeds for the next generation of crops.

So, if all the bees are gone one day, we'd better develop an appetite for corn, pineapples, grapes and bananas. Pasture grasses and forage legumes need bees to make seed, so there'll be no butter for your corn either, not to mention other dairy products. We also won't have cotton for clothing. Or tea. Or coffee.

There are a number of factors killing bees worldwide. One of them is the pollen of GMOs (genetically modified organisms), which is different from the pollen of natural plants. Some parts of the world have banned GMO agriculture and this is a good start.

The most important killer of bees world-wide, however, is one particular class of insecticides: nicotine-like chemicals called neonicotinoids, or neonics for short. The Russian Federation's Ministry of Natural Resources and Environment avows "undisputed evidence" that neonicotinoids are destroying our planet's bee popula-



tion. Left unchecked, this could destroy the world's ability to grow enough food to feed its population.

So grave has this danger become that the European Commission has instituted a two-year precautionary ban on these pesticides, following the lead of Russia, Switzerland, France, Italy, Slovenia and Ukraine.

The Dutch government has banned imidacloprid completely in open-air situations. The product evidently also leaves a residue in the soil that completely destroys the earthworm population that is so important to soil conservation. It also gets into weeds and other crops grown in the same ground.

French beekeepers maintain they have lost thousands of colonies to this pesticide and a sister organo-phosphate called fipronil, and are calling on the French government to remove both products from the market.

### What's happening in the US

Neonicotinoids are now the most widely used group of insecticides in the world, comprising roughly 25% of the global agrochemical market. Their use has been

steadily increasing in the United States where the EPA estimates that over 3.5 million pounds of these chemicals were applied to nearly 127 million acres of agricultural crops each year from 2009 to 2011.

A group of beekeepers from North Dakota is taking one company to court after losing thousands of honeybee colonies in 1995, during a period when oilseed rape in the area was treated with imidacloprid. A third of their honeybees were killed by what has since become known as colony collapse disorder.

The American Bird Conservancy states: "It is clear that these chemicals have the potential to affect entire food chains... their propensity for runoff and groundwater infiltration and largely irreversible mode of action raises significant environmental concerns... Even a tiny grain of wheat or canola treated with the oldest neonicotinoid—called imidacloprid—can fatally poison a bird."

A September 2013 report by the Xerces Society for Invertebrate Conservation concludes that, in addition to its harmful effects on bees, neonic contamination levels in both surface and ground water in the United States and around the world are already beyond the threshold to kill aquatic invertebrates. In this report, the writers made strong recommendations to the EPA and USDA for various types of limitations to be placed on neonicotinoid use.

Neonics are systemic pesticides. Unlike contact pesticides, which remain on the surface of the treated foliage, systemics are taken up by the plant and transported to all the tissues (leaves, flowers, roots and stems, as well as pollen and nectar).

Products containing neonics can be applied at the root (as seed coating or soil drench) or sprayed onto crop foliage. The insecticide toxin remains active in the plant for many weeks, protecting the crop—and killing bees—all season long.

#### Dog owners are contributing

Some of us may unwittingly be routinely applying a monthly dose of a neonic to our dogs. One commonly used top spot flea and tick preventive is composed of 10 per cent imidacloprid as its active ingredient.

The company's website states that it is not toxic to dogs and cats. In laboratory studies, however, imidacloprid has been found to cause thyroid lesions and liver toxicity, increase cholesterol levels and possibly damage the kidneys, liver, thyroid, heart,

lungs, spleen, adrenal, brain and gonads. As a neurotoxin, it has caused loss of coordination, labored breathing and muscle weakness. When this drug was tested after its introduction in 1994, researchers found an increase in birth defects when it was tested on mice, rats and... dogs.

Another top spot ingredient that we use on our dogs routinely is: fiproni, which has been partially banned in the EU because of adverse effects on bees.

At this point, I just have to ask: when are we finally going to wake up and stop using these products on our dogs? And on this planet? In my opinion, anyone who reads this magazine has chosen to be more aware and think outside the box.

It's up to us to start the change.





Since beginning her holistically oriented veterinary practice over 25 years ago, Dr Khalsa has been incorporating homeopathy, acupuncture, Chinese herbs, nutritional advice, allergy-elimination techniques such as NAET and also JMT into her approach. Dr Khalsa is a Fellow and Professor of the British Institute of Homeopathy.



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