

From: Jennings, Henry
Sent: Tuesday, May 29, 2007 10:47 AM
To: Schlein, Paul B
Subject: FW: bee die-off
[For Board Meeting...](#)

-----Original Message-----

From: Nancy Oden [mailto:cleaneearth@tds.net]
Sent: Friday, May 25, 2007 8:29 PM
To: Jennings, Henry
Subject: bee die-off

Dear Mr. Jennings - As Director of the Pesticide Control Board, Mr. Jennings, please warn all growers and individuals in the State of Maine to stop using pesticides containing imidacloprid or other neonicotinoids.

See
<http://www.mlive.com/news/kzgazette/index.ssf?/base/news-23/118002026916110.xml&coll=7#continue>,
 printed out below.

You know, as do we organic growers, that there are clean methods of growing all crops; the Pesticide Control Board should take its responsibility to the people of Maine seriously, and begin immediately to wean pesticide-dependent growers off these and other man-made poisons, all of which are intended to kill parts of Nature, but which harm much more than their intended victims.

Please read and disperse widely the below article. I have sent this e-mail to Governor Baldacci and a number of activists around Maine because we ALL need to worry about what happens to honeybees. Our food supply is at stake, not to mention Maine's economy.

Thank you for taking this seriously. Please do not allow these pesticides to be used in Maine; chemical growers have been appeased far too long. Time to do what's right. Thank you.

- Nancy Oden, Clean Water Coalition, 434-6228

<http://www.mlive.com/news/kzgazette/index.ssf?/base/news-23/118002026916110.xml&coll=7#continue>

Suspect in bee die-off: Insecticide Widely used bug spray may be behind deaths of millions of bees

Thursday, May 24, 2007

By Amy Ellis Nuttm Newhouse News Service

An insecticide is suspected of causing a "colony collapse" disorder that has killed millions of honeybees worldwide and up to half of the 2.5 million colonies in the United States.

The chief suspect, say many scientists, is imidacloprid, the most commonly used insecticide on the planet.

Honeybees come into contact with pesticides because they are needed to pollinate scores of crops, including apples, cherries, blueberries and other crops in southwestern Michigan. The die-off has been a major concern for farmers and scientists, who have been looking into potential causes, from

diseases and parasites to pesticides.

A member of a class of pesticides called neonicotinoids, imidacloprid is a synthetic derivative of nicotine and works by impairing the central nervous system of insects, causing their neurons to fire uncontrollably and eventually leading to muscle paralysis and death.

The potent chemical can be sprayed on plants or coated on seeds, which then release the insecticide through the plants as they grow.

Research has shown that in sublethal doses imidacloprid and other neonicotinoids can impair honeybees' memory and learning, as well as their motor activity and navigation. Recent studies have reported "anomalous flying behavior" in imidacloprid-treated bees, in which the workaholic insects simply fall to the grass or appear unable to fly toward the hive.

Imidacloprid was used on just a few specialty crops when it first came out, but its use has become much more widespread because of its effectiveness against a wide range of pests, said Mark Longstroth, Michigan State University Extension's district educator for fruit in southwestern Michigan.

It is also used by homeowners because "it's very safe for the mammalian system," he said.

Longstroth hasn't reviewed data on how imidacloprid is suspected to affect the honeybees, but he said implicating the chemical as the colony collapse culprit sounds plausible.

Launched in 1994 by Bayer AG, the German health-care and chemical company, imidacloprid is sold under various brand names, such as Admire, Advantage, Gaucho, Merit, Premise and Provado.

Page 2 of 2

It also is manufactured for use on flowers, lawns, trees, golf courses and even pets in the form of flea collars.

The product list soon could grow even longer. Last fall, Bayer announced findings indicating imidacloprid's ability to promote plant health even in the absence of infestation.

"These things (imidacloprid insecticides) do a great job on termites, fleas, ticks, but people forget honeybees are insects, too," said Jerry Hayes, president of the Apiary Inspectors of America and an entomologist with the Florida Department of Agriculture. In the mid-1990s, imidacloprid was implicated in a massive bee die-off in France in which a third of the country's 1.5 million registered hives were lost. After beekeepers protested, imidacloprid was banned for several uses, including treatment of sunflowers and corn seed.

The possibility that neonicotinoids are at the heart of the bee die-off implies a far more complex problem because of their widespread use. Every year these chemicals are applied to hundreds of millions of acres of agricultural lands, gardens, golf courses and public and private lawns

across the United States.

Their use on major crops nearly tripled between 1964 and 1982, from 233 million pounds to 612 million pounds of active ingredients. And since then, their use has exploded. By 1999, the U.S. Environmental Protection Agency reported 5 billion pounds of pesticides used on U.S. crops, forests, lawns, flowers, homes and buildings.

Because of imidacloprid's emergence as a primary player in pest management, a painful paradox has developed in the recent debate. Neonicotinoids are needed by farmers and growers to maintain the health of crops, many of which also require pollination by honeybees.

“Neonicotinoids are now the best aphid insecticide we have,” said Peter Shearer, a specialist in fruit tree entomology with the Rutgers Agricultural and Extension Center in Bridgeton, N.J. “It's very important to our pests that have shown resistance to other chemicals. It's very important to eggplants, potatoes, tomatoes.”

Shearer notes that apple farmers, for instance, don't use Provado, which has imidacloprid as an active ingredient, until after bees used for pollination are removed from the orchards.

“So it doesn't seem to be a logical route of bee die-off,” he said. “It would have to last 11 months.”

However, Shearer also acknowledges that some published studies indicate that imidacloprid can persist on both vegetation and in the soil for weeks, months and perhaps years.

Some U.S. entomologists who recently have been analyzing dead bees have found a remarkably high number of viruses and fungal diseases in the carcasses, leading them to suspect there may be other culprits besides neonicotinoids.

“I don't think there is one smoking gun,” Hayes said. “When neonicotinoids are used on termites, they can't remember how to get home, they stop eating, and then the fungus takes over and kills them. That's one of the ways imidacloprid works on termites -- it makes them vulnerable to other natural organisms. So if you look at what's happening to honeybees, that's pretty scary.”

Gazette staff writer Paula Davis contributed to this report. She can be reached at pdavis@kalamazoogazette.com or 388-8583.

From: Jennings, Henry
Sent: Thursday, June 07, 2007 1:22 PM
To: Schlein, Paul B
Subject: FW: more on death of bees and people - important

For Board Packet...

-----Original Message-----

From: Nancy Oden [mailto:cleaneearth@tds.net]
Sent: Thursday, June 07, 2007 1:18 PM
To: Jennings, Henry; Governor
Subject: more on death of bees and people - important

<http://www.i-sis.org.uk/Parasiticfungi.php>

Director Jennings & Governor Baldacci - Further scientific studies See website above and printed article below) on how pesticides, acting to weaken immune systems (and bees are just the beginning), encourage parasitic fungi to attack the bees, killing them. This must stop.

It is your responsibility, Director of Pesticide Control Board Jennings, to stop the use of pesticides whenever and wherever possible. There ARE clean methods of eliminating unwanted plants, fungi, insects - we do not need, nor should anyone be using, toxic manmade chemicals.

Please begin to protect the people and wildlife, woods and waters of Maine, rather than pandering to the corporados who see nothing but dollar bills for themselves, while we subsidize them with our health, indeed, years of our lives.

What will it take for you to act? A massive spraying of children which shows up immediately, not years later as cancer or fertility problems? Human males, as well as males of other species, too, have been losing their sperm count at alarming rates. Every year the sperm count of human males, and wolves, whales, millions of other creatures, drops by several percentage points due to poisoning of the sperm by manmade chemicals, mostly pesticides.

YOU and the GOVERNOR are RESPONSIBLE, so long as you do nothing, for all this damage to us and future generations.

Soon money will not matter - we will be struggling to keep our bodily functions working in the face of the continued onslaught of pesticides and other industrial chemicals.

Do you want this on your conscience? Do you believe you will have to answer for your sins, someday, some way?

If you care about your souls, you WILL issue orders to stop poisoning the populace and all of Nature.

Please read the below article by public, rather than corporate, scientists. People are sick of being sickened. Stop it now.

- Nancy Oden, Clean Water Coalition, Jonesboro, Maine 04648
phone 434-6228

----- Original Message -----

From: <press-release@i-sis.org.uk>

To: <cleaneearth@acadia.net>

Sent: Thursday, June 07, 2007 9:49 AM

Subject: <http://www.i-sis.org.uk/Parasiticfungi.php>

> The intended recipient for this message is cleaneearth@acadia.net
> The Institute of Science in Society
> Science Society Sustainability
> <http://www.i-sis.org.uk>

>
> This article can be found on the I-SIS website at
> <http://www.i-sis.org.uk/Parasiticfungi.php>

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>
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> =====
> ISIS Press Release 07/06/07

>
> Parasitic Fungi and Pesticides Act Synergistically to Kill
> Honeybees?

>
> Prof. Joe Cummins presents evidence that parasitic fungi can

- > kill insects when low, otherwise non-lethal concentrations
- > of pesticides are present
- >
- > Co-operating culprits
- >
- > Honeybees are facing an unparalleled threat from something
- > that's causing them to leave their hives, never to return.
- > Scientists call it "colony collapse disorder" (CCD) [1]
- > (Mystery of Disappearing Honeybees, SiS 34). The major
- > suspects in the murder of honeybees appear to be systemic
- > insecticides (the neonicotinoid systemic pesticides used
- > worldwide to treat seeds and crops), including genetically
- > modified (GM) crops [1, 2] (Requiem for the Honeybee, SiS
- > 34), parasitic fungi [3] (Parasitic Fungus and Honeybee
- > Decline SiS 35), and radiation associated with wireless
- > phones [4] (Mobile Phones and Vanishing Bees, SiS 34).
- >
- > It is unlikely, however, that the suspects act independently
- > of one another, and there is evidence suggesting that
- > parasitic fungi and pesticides interact synergistically in
- > killing honeybees.
- >
- > Parasitic fungi for biocontrol enhanced by sub-lethal levels
- > of neonicotinoid pesticide
- >
- > Parasitic fungi are used extensively as biocontrol agents.
- > Fungal spores are applied in sprays or baits, and it has
- > been observed that the parasites frequently interact
- > synergistically with neonicotinoid pesticides, particularly
- > imidacloprid, in killing insects. When the spores are
- > delivered as a suspension together with low, non-lethal
- > levels of the pesticide, the insect-killing activity of the
- > fungal spores is significantly enhanced. The spores of
- > *Beauveria bassiana* used to treat the brown leafhopper rice
- > pest, when accompanied by a sublethal dose of imidacloprid,
- > killed the pest earlier and in larger numbers [5].
- >
- > Read the rest of this article here
- > <http://www.i-sis.org.uk/Parasiticfungi.php>
- >
- > Or read other articles on bees in the environment section
- > of the Institute of Science in Society Website
- > <http://www.i-sis.org.uk/scienv.php>

>
> =====
> This article can be found on the I-SIS website at
> <http://www.i-sis.org.uk/Parasiticfungi.php>
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> Checked by AVG Free Edition.
> Version: 7.5.472 / Virus Database: 269.8.11/837 - Release Date: 6/6/2007

> 2:03 PM

>

>

From: Jennings, Henry
Sent: Friday, June 08, 2007 1:20 PM
To: Schlein, Paul B
Subject: FW: Bayer's Imidacloprid: Possible Culprit identified in Decline of Honeybees
[More Board Meeting Stuff...](#)

-----Original Message-----

From: Nancy Oden [mailto:cleaneearth@tds.net]
Sent: Friday, June 08, 2007 1:00 PM
To: Jennings, Henry
Subject: Fw: Bayer's Imidacloprid: Possible Culprit identified in Decline of Honeybees

----- Original Message -----

Sent: Friday, June 08, 2007 12:16 PM
Subject: Bayer's Imidacloprid: Possible Culprit identified in Decline of Honeybees

- [Protection of Bees: Open Letter to EU Commissioner of Health](#)
- [Bee-keepers and environmental groups demand prohibition of pesticide "Gaucho"](#)
- [French Institutes Finds Imidaproclid Turning Up in Wide Range of Crops](#)

The Star-Ledger (Newark, N.J.), May 28, 2007

Possible culprit identified in decline of honeybees

They are among the most sensitive and hardest-working creatures in nature. Ancient navigators of the air, honeybees are guided between hive and flower by the angle and direction of the sun. Their internal clock signals the time of day a particular flower's nectar is flowing. And daily changes in the earth's magnetic cycle alert those in the darkened hive to sunrise and sunset.

A mysterious ailment, however, is causing the great pollinators to lose their way home. The disorder, called "colony collapse," has resulted in the deaths of millions of honeybees worldwide and up to half of the 2.5 million colonies in the United States.

The chief suspect, say many scientists, is the most commonly used insecticide on the planet: imidacloprid.

"I grew up in the 1960s, and this reminds me of Rachel Carson's "Silent Spring,"" says Douglas Fisher, a New Jersey state legislator, referring to the 1962 book that warned the world about the long-term effects of agricultural chemicals on the environment.

Last week Fisher escorted New Jersey's secretary of agriculture, Charles M. Kuperus, to some hard-hit beekeeping operations in the legislator's Salem County district.

Launched in 1994 by Bayer, the German health care and chemical company, imidacloprid is used to

combat insects such as aphids that attack more than 140 crops, including fruits and vegetables, cotton, alfalfa and hops. Sold under various brand names, such as Admire, Advantage, Gaucho, Merit, Premise and Provado, imidacloprid also is manufactured for use on flowers, lawns, trees, golf courses and even pets in the form of flea collars. The list soon could grow even longer. Last fall, Bayer announced findings indicating imidacloprid's ability to promote plant health even in the absence of infestation.

But while it is a successful insecticide, the chemical, in sublethal doses, may be wreaking havoc on honeybees' nervous systems. In the mid-1990s, imidacloprid was implicated in a massive bee die-off in France, in which a third of the country's 1.5 million registered hives were lost. After beekeepers protested, imidacloprid was banned for several uses, including treatment of sunflowers and corn seed. At the same time, beekeepers in Germany, Poland, Spain and Switzerland were suffering similar losses.

"These things (imidacloprid insecticides) do a great job on termites, fleas, ticks, but people forget honeybees are insects, too," said Jerry Hayes, president of the Apirary Inspectors of America and an entomologist with the Florida Department of Agriculture. "It amazes me the disconnect that chemical companies have - or are allowed to have - in terms of the effects (of pesticides) on good insects."

Honeybees come into contact with pesticides because insects are needed to pollinate scores of crops, such as apples, blueberries, cantaloupes, cranberries, cucumbers, pumpkins and watermelons.

Imidacloprid is one of the newer chemicals especially effective against a wide range of pests. A member of a class of pesticides called neonicotinoids, it is a synthetic derivative of nicotine and works by impairing the central nervous system of insects, causing their neurons to fire uncontrollably and eventually leading to muscle paralysis and death.

The potent chemical can be sprayed on plants, or coated on seeds, which then release the insecticide through the plants as they grow. In sublethal doses, however, research has shown that imidacloprid and other neonicotinoids, such as fipronil, can impair honeybees' memory and learning, as well as their motor activity and navigation. When foraging for food and collecting nectar, honeybees memorize the smells of flowers and create a kind of olfactory map for subsequent trips.

However, in laboratory and field studies, honeybees exposed to imidacloprid seem to wander off, which may explain, say scientists, why hives all over the world are turning up empty. Recent studies have reported on the "anomalous flying behavior" of imidacloprid-treated bees where the workaholic insects simply fall to the grass or appear unable to fly toward the hive.

In 2003, a French television documentary team filmed honeybee activity after exposure to imidacloprid. Clumsy and uncoordinated, their legs trembling, the bees looked like drunks unable to find the key to the front door of their hive. Others had trouble leaving the hive, seemed disoriented, and when they were eventually able to make their way out, soon disappeared, never to return.

The possibility that neonicotinoids are at the heart of the bee die-off implies a far more complex problem because of the widespread use of pesticides. Every year these chemicals are applied to hundreds of millions of acres of agricultural lands, gardens, golf courses and public and private lawns across the United States. Their use on major crops nearly tripled between 1964 and 1982, from 233

million pounds to 612 million pounds of active ingredients. And since then, their use has exploded. By 1999, the U.S. Environmental Protection Agency reported 5 billion pounds of pesticides used on U.S. crops, forests, lawns, flowers, homes and buildings.

Because of imidacloprid's emergence as a primary player in pest management, a painful paradox has developed in relation to the recent debate. Neonicotinoids are needed by farmers and growers to maintain the health of crops, many of which also require pollination by honeybees.

"Neonicotinoids are now the best aphid insecticide we have," said Peter Shearer, a specialist in fruit tree entomology with the Rutgers Agricultural and Extension Center in Bridgeton, N.J. "It's very important to our pests that have shown resistance to other chemicals. It's very important to eggplants, potatoes, tomatoes."

Shearer notes that apple farmers, for instance, don't use Provado, which has imidacloprid as an active ingredient, until after the bees, which are used for pollination, are removed from the orchards. "So it doesn't seem to be a logical route of bee die-off," he said. "It would have to last 11 months." However, Shearer also acknowledges that some published studies indicate that imidacloprid can persist on both vegetation and in the soil for weeks, months and perhaps years.

In France, there have been inconsistent results since the bans on imidacloprid went into effect. In 2005, for the first time in a dozen years, the French honey harvest improved, but only in certain regions, according to the country's beekeeping federation.

Some U.S. entomologists, who recently have been analyzing dead bees, have found a remarkably high number of viruses and fungal diseases in the carcasses, leading them to suspect there may be other culprits besides neonicotinoids. A 2004 University of North Carolina study, for instance, found that some neonicotinoids, in combination with certain fungicides, increased the toxicity of the "neonics" to honeybees a thousand-fold.

"I don't think there is one smoking gun," said Hayes. "When neonicotinoids are used on termites, they can't remember how to get home, they stop eating and then the fungus takes over and kills them. That's one of the ways imidacloprid works on termites - it makes them vulnerable to other natural organisms. So if you look at what's happening to honeybees, that's pretty scary."

Last week the five-state Mid-Atlantic Apiculture Research and Extension Consortium released a progress report on colony collapse disorder. Its findings included "the high prevalence of fungi in adult bees" which seemed "indicative of stress or a compromised immune system; these symptoms have never been previously reported."

Another entomologist at the Rutgers center, Gerald Ghidui, knows there is no simple answer to the problem. "They've been looking at this since the late 1990s," said the vegetable specialist. "They've done quite a few studies and they still can't find the direct link. Seventy-five percent of the vegetable crops in Arizona gets imidacloprid, but they have no problems with the honeybees right now. So why isn't it straight across the board? Everyone is in the dark over this."

Coalition against BAYER Dangers
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