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NRDC Sues EPA for Honey Bee Lab Data and EPA Approves Another Bee-Killing Pesticide

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“Sometimes in combination, multiple pesticides are many times more toxic than either one would be individually ...A chemical combination can be 1,000 times more toxic than each of the individual pesticides.”

- Aaron Colangelo, Sr. Attorney, NRDC

September 25, 2008 Washington, D. C. - For two years, honey bees have been dying and disappearing in massive numbers throughout North America, Europe and spreading to other parts of the world. Half of Italy's bee population died in 2007 and in September 2008, the Italian government issued a ban on four nicotine-based pesticides linked to honey bee deaths, including clothianidin and imidacloprid. Argentina has lost more than 30% of its bees and the British Beekeepers Association reports that one-third of English honey bee hives did not survive through this past spring. The Association says if colony collapse disorder continues, “honey bees will disappear completely from Britain by 2018, causing calamitous economic and environmental problems.”

French beekeepers linked massive die-offs of their bees with sprays of the nicotine-based pesticide imidacloprid made by Bayer CropScience of Germany. In 2003, French farmers rioted and demanded the government ban the pesticide to save their bees. And France *did* ban imidacloprid, also known as Gaucho, from use on sunflowers and sweetcorn. European researchers also found in lab research that imidacloprid interferes with bee memories so the insects can't find their way back to the hives.

While France banned imidacloprid in 2003, that same year back in the United States, the Environmental Protection Agency (EPA) approved with a *conditional* registration yet another nicotine-based pesticide manufactured by Bayer called clothianidin, also known as Poncho, PonchoBeta and Prosper. “Conditional” meant EPA had concerns about the nicotine-based pesticide's effect on honey bees, but EPA let Bayer put the pesticide on the market anyway while EPA said it would gather more research data.

Last month on August 13, 2008, German beekeepers and a consumer advocate group filed a legal complaint against Bayer CropScience to determine how much Bayer really knows about the lethal impact that nicotine-based clothianidin can have on honey bees. The German coalition's attorney said, “We suspect that Bayer submitted flawed studies to play down the risks of nicotine-based pesticide residues in treated crops.” Bayer's pesticide sales are a billion dollars a year.

Nicotine-based pesticides were also what American beekeepers were worried about in the fall of 2006 when their bees first began disappearing in massive numbers. That's when the University of Pennsylvania contacted the Environmental Protection Agency to get the EPA's original data about clothianidin.

EPA is still withholding data, so on Monday, August 18, 2008, NRDC filed a lawsuit to “uncover critical information that the U. S. government is withholding about the risks posed by nicotine-based pesticides to honey bees. EPA should be evaluating the risks to bees before approving new pesticides, but now refuses to tell the public what it knows. Pesticide restrictions might be at the heart of the solution to this growing honey bee crisis, so why hide the information that EPA should be using to make those decisions?”

Recently I talked with Aaron Colangelo, Senior Attorney for the Natural Resources Defense Council (NRDC) in Washington, D. C., who filed the lawsuit. I asked him about EPA's pesticide approval process.

Interviews:

Aaron Colangelo, Senior Attorney, Natural Resources Defense Council, Washington, D. C.: “EPA has left a lot of old, bad toxic chemicals on the market way too long and

re-approved them despite overwhelming evidence of human health risks – and now we’re seeing with a lot of these newer pesticides like imidacloprid or like clothianidin – which the NRDC just sued over - EPA’s hastily approving these new pesticides and not reacting quickly to evidence of environmental harm, like harm to bees.

But part of the problem is EPA’s whole conditional approval process to begin with and thinking about it, what that means is that EPA has said, ‘We’re worried about this pesticide (clothianidin) for one reason or another. In this case, one of the reasons was harm to bees. So, EPA said, ‘There’s reason for concern here about harm to bees, but we’re going to approve it anyway while we ask Bayer to conduct additional studies and we’ll leave it on the market while we wait for those studies to come in.’

And the reason that NRDC sued is that five years later, there was no public information. We couldn’t find out from the EPA website or anywhere else whether those (Bayer) studies had been conducted and submitted to EPA? And if so, what did they show? Did they actually show safety? Or did they raise more concerns?

And we still don’t have a clear answer to that. EPA and Bayer have both said since we sued that the studies have been submitted and they show safety. But we haven’t seen the actual studies themselves. So we still think there is no way for the public to evaluate the information about harm that this (clothianidin) pesticide causes to bees.

But there does seem to be a growing scientific consensus that pesticides are implicated – that they might be contributing in some way and that’s what we are trying to find out. The researchers at Penn State have identified, I think, dozens of different pesticides that they have found in pollen and in beehives. So, we know that there is just tons of exposure and also EPA is approving pesticides that are known to be highly toxic to bees. And this exposure might be interacting with other environmental factors or with a virus or something and working in combination to play a role in Colony Collapse Disorder (CCD).

YES, AND IT IS THE SYNERGY OF SO MANY CHEMICALS OUT THERE NOW IN THE LANDSCAPE, OVERLAYING WITH EACH OTHER. AND ON THAT VERY POINT, JERRY HAYES IN THE FLORIDA DEPARTMENT OF AGRICULTURE CONTACTED ME THIS WEEK TO SEND ME A COPY OF THE NEW WARNING LABEL FROM BAYER CROP SCIENCE ON A BRAND NEW PESTICIDE CALLED ‘MOVENTO.’ IT SAYS QUOTE: ‘THIS PRODUCT IS POTENTIALLY TOXIC TO HONEY BEE LARVAE THROUGH RESIDUES IN POLLEN AND NECTAR, BUT NOT TO ADULT HONEY BEES. EXPOSURE OF ADULT BEES TO DIRECT TREATMENT OR RESIDUES ON BLOOMING CROPS, CAN LEAD TO EFFECTS ON HONEY BEE LARVAE.

And one problem with that kind of label and the label language you just read is that the (chemical) industry almost uses it as a kind of Get Out of Jail Free card – that if enough warnings are on the label, then we (Bayer) can be exonerated from any harm that’s caused. And another problem with that is that these labels are pages and pages long. They might have detailed instructions about what time of year and what wind speed and what nozzle size on your sprayer is or is not appropriate, depending on which crop and when they are blooming. And to expect every applicator, every farmer who is using that pesticide to read the fine print for pages and pages and comply with it in every case is just asking too much.

EPA really needs to develop a comprehensive strategy for protecting honey bees and look at all the different pesticides that are already on the market that are known to be highly toxic to bees. Sometimes in combination, multiple pesticides are many times more toxic than either one would be individually.

So, sometimes with different pesticides combined into the same product, $1 + 1 = 1,000!$ A chemical combination can be *1,000 times more toxic* than each of the individual pesticides. And that’s something that EPA does not evaluate when they approve new pesticides for use.

YES, HOW DO WE PUT ALL OF THIS CHEMICAL SOUP BACK INTO THE BOTTLE?

(laughs) Well, that we can’t do! Unfortunately, there is a lot of toxicity, toxic residues to these chemicals out there that are just going to have to, unfortunately, degrade over time. And that might be over a long time.”

The latest Bayer pesticide called “Movento” is a new class of pesticides called lipid biosynthesis inhibitors that interfere with nerve transmissions. That means honey bees and other pollinators will be trying to survive in crops contaminated by not only nicotine-based

pesticides, but by the new Movento. Its 13-page warning label says Movento is toxic to honey bee larvae, either directly upon contact or indirectly from exposure to pollen and nectar brought back to hives by adult bees that are contaminated by Movento.

Jerry Hayes is assistant chief of Florida's Department of Agriculture Plant and Apiary Inspection Section. When he recently sent me a copy of the Bayer CropScience warning label for Movento, the new pesticide had received EPA approval in June 2008 - after two years of continuing massive honey bee disappearances in colony collapse disorder. Jerry Hayes and his apiary colleagues cannot understand why EPA would approve another bee-killing pesticide without involving the beekeeping world in the decision. Further, he told me that this new Movento pesticide is one of the most disturbing in his 25-year-long apiary career.

Jerry Hayes, Assistant Chief, Bureau of Plant and Apiary Inspection, Division of Plant Industry, Florida Department of Agriculture, Gainesville, Florida: "These chemicals inhibit production of fats and fatty acids in animals. Lipid fats are important for nerve transmissions and other things in our metabolism.

MOVENTO SCARES YOU, RIGHT?

Oh, absolutely!

AND WHAT NOW IS YOUR GREATEST CONCERN?

(laughs) I hate to laugh because it seems the sky gets darker all the time. We have been struggling with pesticide issues concerning honey bees and other pollinators for years. We've had this class of chemicals called 'neonicotinoids' that seem to have been affecting honey bees negatively in many different ways. We've discussed CCD and now we have a product that the company (Bayer) blatantly and openly says that it will be toxic to honey bee larvae through residues in pollen and nectar. So, what this tells me is that this material is systemic. If applied to a plant, it gets into all parts of the plant – leaves and stems and everything else – and also into the pollen and the nectar in those flowers. The adult honey bees collect this (Movento-contaminated) material for for for their developing young. This material will be toxic to developing honey bees, which means that honey bee colonies potentially might collapse and die from this additional (Movento) input.

HOW COULD THE ENVIRONMENTAL PROTECTION AGENCY APPROVE REGISTRATION OF 'MOVENTO'?

It's an excellent question and we in the industry and some industry groups are trying to propose a meeting with the EPA so that they can get some more facts about why this product was approved without perhaps some more research data behind it.

One thing is that it certainly does not look like honey bees or other pollinators are valuable to this company (Bayer) or to the EPA. (If you did) you don't put some type of warning on there about it will positively kill developing honey bees. It's beyond me!

WHAT IS YOUR PERSPECTIVE ABOUT HAVING NEONICOTINOIDS AND MOVENTO OUT IN THE LANDSCAPE AT THE SAME TIME?

It certainly is going to put an additional level of stress on the beekeeping industry – on honey bees and solitary bees and bumblebees and other regional pollinators. That won't be good! We are going to continue losing these pollinators.

Everyone in our small, but vital, industry are certainly scratching their heads wanting to know how something like this could have taken place without a little bit more input from the apiary industry?

THE HONEY BEE PEOPLE WERE NOT BROUGHT INTO DISCUSSIONS WITH EPA OR BAYER ON OKING THE REGISTRATION OF MOVENTO?

No, they weren't and I guess the EPA is on automatic. They have people come to them. These people have supposedly done the science and the field testing. They present that information to the EPA and then the EPA accepts it or rejects it. There is not a whole lot of public input.

SO, WHAT YOU MEAN IS THAT BAYER DID ITS OWN FIELD TESTS AND THEN SUBMITTED THAT WORK TO THE ENVIRONMENTAL PROTECTION AGENCY, WHICH BASICALLY RUBBER STAMPED THE BAYER SELF-SERVING FIELD TESTS?

Yes, EPA accepts all data whether it's from Bayer or other companies on products, assuming that their (companies) science is good. And it's kind of like putting the fox in the hen house, isn't it?

YES, AND I'M CURIOUS WHAT YOU ALL THINK YOU MIGHT BE ABLE TO ACCOMPLISH WITH EPA IN THE UPCOMING MEETING?

Well, I think it's probably drawing a line in the sand and saying that the beekeeping industries are concerned, that the beekeeping industries want to be more involved, and are there some perhaps some label restrictions that could be suggested?

(The Movento approval) probably isn't going to be rescinded, but the best we can hope for is some modification of label usage.

THIS IS AN EXPERIMENT WITH CHEMICAL STEWS THAT HAVE CONSEQUENCES THAT NO ONE UNDERSTANDS YET?

No, no one. Zippo! Zero! Nada!"

For further information about honey bees and colony collapse disorder, please see reports below in the **Earthfiles Archive**:

- 08/31/2008 — Honey Bees Not Healthy in U. S. or U. K.
 - 08/15/2008 — Amphibian Warning Bell of Mass Extinctions
 - 04/10/2008 — Honey Bee Collapse Now Worse on West Coast
 - 02/29/2008 — Mysterious Bat Deaths in New York, Vermont and Massachusetts
 - 01/18/2008 — Amphibians Dying Out At Alarming Rate
 - 10/13/2007 — Now Bumblebees Are Disappearing, Too.
 - 09/26/2007 — North American Honey Bees Still Weak
 - 09/18/2007 — E. coli and Salmonella Continue to Threaten American Bagged Salad Greens
 - 09/07/2007 — Honey Bee DNA Study Finds Australian Virus in Colony Collapse Disorder
 - 07/11/2007 — Mystery of Night Shining Clouds - Another Global Warming Change?
 - 06/28/2007 — Hackenberg Apiary, Pennsylvania - 75-80% Honey Bee Loss in 2007. What Happens If Colony Collapse Disorder Returns?
 - 05/04/2007 — Environmental Emergency Updates: Part 1 - Spreading Honey Bee Disappearances - Nosema ceranae Not the Answer?
 - 04/06/2007 — Collapse of Honey Bees in U. S., Canada and 9 European Countries
 - 03/17/2007 — Honey Bee Disappearances Continue: Could Pesticides Play A Role?
 - 02/23/2007 — Part 1: Earth Life Threats - Alarming Disappearance of Honey Bees
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Websites:

Environmental News Network: <http://www.enn.com/wildlife/article/38233>

Movento at Bayer CropScience: http://www.bayercropscienceus.com/products_and_seeds/insecticides/movento.html

Environmental Protection Agency: <http://www.epa.gov/>

AAAS Science Journal: <http://www.sciencemag.org/cgi/content/summary/317/5843/1304>

Truth Behind Insecticide "Merit": http://www.rosemania.com/Pesticide_update.htm

Mid-Atlantic Apiculture Research and Extension Consortium (MAAREC):
<http://maarec.cas.psu.edu/>

Colony Collapse Disorder (CCD): <http://www.ento.psu.edu/MAAREC/pressReleases/CCDSummaryWG0207.pdf>

Apiary Inspectors of America (AIA): <http://www.apiaryinspectors.org/>

Biology of Honey Bees: http://plantphys.info/Plants_Human/bees/bees.html

Varroa Mites: <http://www.uky.edu/Ag/Entomology/entfacts/struct/ef608.htm>

Honey Bee Tracheal Mites: http://creatures.ifas.ufl.edu/misc/bees/tracheal_mite.htm

National Bee Loss Survey: <http://beealert.blackfoot.net/~beealert/surveys/index.php>

American Beekeeping Federation: <http://www.abfnet.org/>

American Honey Producers Assoc.: <http://www.americanhoneyproducers.org/>

The Xerces Society (Pollinators At Risk): http://www.xerces.org/Pollinator_Insect_Conservation/pollinators_at_risk.html

American Assoc. of Professional Apiculturists: <http://entomology.ucdavis.edu/aapa/aapapubs.cfm>

***Bee Culture*, The Magazine of American Beekeeping**
<http://www.beeculture.com>

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