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Capitol Hill Briefing on Neonicotinoids, Birds, and Bees

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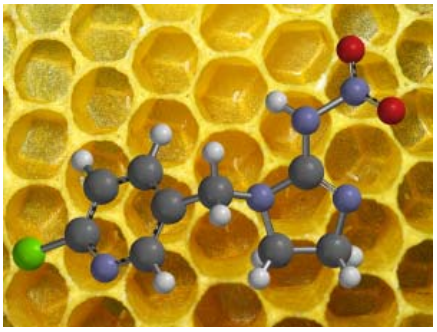

Imidacloprid structure overlaying honeycomb of the Western honey bees (Credit: Williamseanohlinger/Wikimedia, and Waugsberg/Wikimedia)

On Tuesday, March 19, Congressional staff, members of the press, and the public attended a briefing about the toxic effects of neonicotinoid pesticides (NNI) and their impact on birds, bees, and other wildlife. The briefing occurred just days after the European Commission opted not to ban three of the NNIs (clothianidin, imidacloprid, and thiametoxam). NNIs are a class of systemic neuronal insecticides, related to nicotine, which were initially introduced to replace highly toxic organophosphates.

Toxicologist Pierre Mineau, an emeritus scientist with Environment Canada, presented the results from his meta-analysis on the toxicity of NNIs (acetamiprid, imidacloprid, thiacloprid, clothianidin, and thiamethoxam) to birds. His results served as the basis of the American Bird Conservancy's report on Neonicotinoid Insecticides and Birds. The largest concern in the report was the acute, chronic, and reproductive toxicity of treated seed ingested by birds.

Following Mineau's presentation, Scott Hoffman Black of the Xerces Society for Invertebrate Conservation and member of the IUCN Butterfly Specialist Group, and Steve Ellis, commercial beekeeper with Old Mill Honey Company, further discussed the devastating impact of these insecticides on non-target invertebrate populations. Ellis described how the complex issue of colony collapse disorder (CCD) has impacted his business, and the broader agriculture industry in California. He stated that this year there has been over 30 percent bee mortality, and while Old Mill has 2,300 hives, the current collapse precluded them from being able to fully pollinate the California almond crop (which requires 1.5 million bee hives for just over 800,000 acres of almond trees, or 2 hives/acre). It is estimated that there are more than 200 million acres of treated NNI land in the U.S. In 2009, California began a reevaluation of 50 registrants containing imidacloprid, clothianidin, dinotefuran, and thiamethoxam within 282 pesticide products.

Peter Jenkins, a consulting attorney for the Center for Food Safety (CFS), followed up by giving an overview of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and conditional registration of NNIs. The EPA may conditionally register a pesticide containing an active ingredient not in any currently registered product for a period deemed reasonably sufficient for the generation and submission of data necessary for registration under FIFRA, as was the case with NNIs. NNI insecticides were given conditional registration between the late 1990s and early 2000s. According to Jenkins, the EPA plans to complete their review of these pesticides by 2018. CFS and commercial bee keepers feel that this will be too late to recover from the adverse effects they are currently documenting. CFS suggests that Congress act now to suspend the registration of NNIs until all data can be thoroughly analyzed.

In addition to the CFS recommendation, the panel further recommended a ban on the practice of treating corn seed with NNIs and an amendment to the "conditional approval process" so that safety reviews must be conducted within one year. The panel also noted the need to develop methodologies to diagnose die-offs of birds, bees, and other genera from these NNIs, (as some can have delayed effects) and the need for improved or mandated communications between the EPA and USDA concerning approval of insecticides on pollinators, so that the best science is utilized during the approval process.

Sources: *California Department of Pesticide Regulation: Neonicotinoids, California Department of Pesticide Regulation Notice of initiation of Neonicotinoid reevaluation, Colony Collapse Disorder: European Bans on Neonicotinoid Pesticides, IUCN taskforce on Systemic Pesticides, Neonicotinoid Insecticides and Birds, The Guardian* (March 15, 2013).

For more information, visit:

Existing Scientific Evidence of the Effects of Neonicotinoid Pesticides on bees (Eurpoean Parliament).

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