



Pollinator Stewardship Council

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May 5, 2015

Susan Lewis, Registration Division (7505P)
OPP Docket
Environmental Protection Agency Docket Center (EPA/DC), (28221T)
1200 Pennsylvania Ave. NW.
Washington, DC 20460-0001

Re: Pesticide Experimental Use Permit EPA-HQ-OPP-2014-0667-0001

Experimental use of Clothianidin soil drench on 500 acres of corn in MN, SD, WI

Dear Ms. Lewis,

The American Honey Producers Association, The American Beekeeping Federation, the National Honey Bee Advisory Board, and the Pollinator Stewardship Council request you deny the experimental use permit for clothianidin on five hundred acres of corn in Minnesota, South Dakota, and Wisconsin.

On April 2, 2015 the United States Environmental Protection Agency (EPA) announced it had informed pesticide manufacturers by letter new outdoor uses of neonicotinoid pesticides would not be approved “*until new bee data have been submitted and pollinator risk assessments are complete.*”¹ Specifically, the EPA clarified no new outdoor uses to include:

- *“New Uses (including crop group expansion requests)*
- *Addition of New Use Patterns, such as aerial application*
- *Experimental Use Permits*
- *New Special Local Needs Registrations*”²

The April 2nd letter went on to say:

*“This is an interim position. However, if a significant new pest issue should arise that may be uniquely addressed by one of these chemicals, EPA is prepared to consider whether an emergency use under FIFRA section 18 might be appropriate.”*³

This request by the pesticide registrant is for an *experimental use*; not an emergency use.

We believe EPA's decision was a prudent one, and encourage it to maintain its position against approving experimental uses until pollinator risk assessments are complete. Clothianidin in particular, is documented as causing both acute and chronic harm to honey bees when used on corn. *"Experimental results show that the environmental release of particles containing neonicotinoids can produce high exposure levels for bees, with lethal effects compatible with colony losses phenomena observed by beekeepers."*⁴ Research shows Clothianidin *"adversely affects the insect immune response and promotes replication of a viral pathogen in honey bees bearing covert infections."*⁵

Of particular concern is Clothianidin is soluble in water, and thus has the potential to contaminate the surface waters which honey bees rely upon for drinking. A 2014 US Geological Survey (USGS) study found neonicotinoid chemicals including Clothianidin are leaching into streams and rivers in the Midwest, including the Missouri and Mississippi rivers. The USGS *"found three chemicals in particular to be especially prevalent throughout the region: clothianidin, thiamethoxam and imidacloprid. Clothianidin was found in three quarters of the 79 water samples that the researchers gathered in 2013 at nine different stream sites."*^{6,7,8}

Further, in a study of the "Widespread Use and Frequent Detection of Neonicotinoid Insecticides in Wetlands of Canada's Prairie Pothole Region" researchers found *"neonicotinoid use is increasing and becoming more widespread with concerns for environmental loading, while frequently detected neonicotinoid concentrations in Prairie wetlands suggest high persistence and transport into wetlands."*⁹

Researchers studying "Neonicotinoid-Contaminated Puddles of Water Represent a Risk of Intoxication for Honey Bees" concluded *"risk assessment of honey bee water resources underestimates the foragers' exposure and consequently miscalculates the risk. In fact, our data shows that honey bees and native pollinators are facing unprecedented cumulative exposure to these insecticides from combined residues in pollen, nectar and water."*¹⁰

Finally, we have particular concern with the proposed soil drenching of Clothianidin. One characteristic of soil drench applications is a larger soil profile is treated with the chemical when compared to a seed treatment. Soil drench application enables the crop root system to take up more of the systemic pesticide treatment application. This ensures the plant will retain a higher level of pesticide for a longer period of time. This is because the roots remain in the larger treated soil profile longer as the plant grows. The high solubility property of Clothianidin would make the treated soil profile even larger.

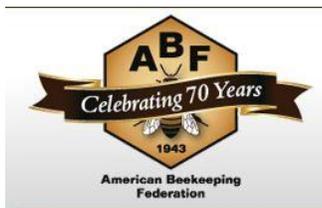
In short, EPA's own April 2nd letter was a responsible step in the right direction to protect pollinators by ceasing any new outdoor uses of neonicotinoids including experimental use of Clothianidin until pollinator risk assessment is complete. This was a responsible decision consistent with EPA's ongoing review of the science and potential impacts of neonicotinoids on honey bees and other pollinators. As you know, the EPA is requiring new honey bee studies for its *"ongoing registration review process for the neonicotinoid pesticides; and that the Agency must complete its new pollinator risk assessments which are based in part on the new data, before it will likely be able to make regulatory decisions on imidacloprid, clothianidin, thiamethoxam, and dinotefuran that would expand the current uses of these pesticides."*¹¹ EPA

clearly states in their April 2nd directive to pesticide manufacturers, they will not permit new outdoor uses, including experimental uses of neonicotinoids until the new pollinator risk assessments are complete. EPA acknowledged the need to complete the risk assessment review of Clothianidin, and we agree with the need for a risk assessment review. As such, we support EPA's decision not to approve new outdoor uses, and strongly encourage EPA to stand by their decision by denying the current application for an experimental use permit.

Sincerely,




Darren Cox
President




Tim Tucker
President




Bret Adee
President





Bret Adee
Co-Chair



Dave Hackenberg
Co-Chair

National Honey Bee Advisory Board

¹ http://www.epa.gov/oppfead1/cb/csb_page/updates/2015/neonic-outdooruse.html

² Ibid

³ Ibid

⁴“Assessment of the environmental exposure of honeybees to particulate matter containing neonicotinoid insecticides coming from corn coated seeds,” Tapparo A, Marton D, Giorio C, Zanella A, Soldà L, Marzaro M, Vivan L, Girolami V. *Environ Sci Technol.*, 2012 Mar 6;46(5):2592-9. doi: 10.1021/es2035152. Epub 2012 Feb 17.

⁵“Neonicotinoid clothianidin adversely affects insect immunity and promotes replication of a viral pathogen in honey bees,” Gennaro Di Prisco, Valeria Cavaliere Desiderato Annoscia, Paola Varicchio, Emilio Caprio, Francesco Nazzi, Giuseppe Gargiulo, and Francesco Pennacchio, Edited by Gene E. Robinson, University of Illinois at Urbana–Champaign, Urbana, IL, and approved October 1, 2013 (received for review August 8, 2013)

⁶ <http://www.sciencedirect.com/science/article/pii/S0269749114002802>;

⁷ <http://toxics.usgs.gov/highlights/2014-07-21-neonics.html>

⁸ Widespread occurrence of neonicotinoid insecticides in streams in a high corn and soybean producing region, USA
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⁹ Main AR, Headley JV, Peru KM, Michel NL, Cessna AJ, et al. (2014) Widespread Use and Frequent Detection of Neonicotinoid Insecticides in Wetlands of Canada’s Prairie Pothole Region. *PLoS ONE* 9(3): e92821. doi:10.1371/journal.pone

¹⁰ Neonicotinoid-Contaminated Puddles of Water Represent a Risk of Intoxication for Honey Bees
Olivier Samson-Robert¹, Genevieve Labrie², Madeleine Chagnon³, Valerie Fournier¹

¹¹ http://www.epa.gov/oppfead1/cb/csb_page/updates/2015/neonic-outdooruse.html