



Pollinator Stewardship Council

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EPA Decision Conflicting

The U.S. Environmental Protection Agency (EPA) announced April 2, 2015 it had informed pesticide manufacturers that new outdoor uses of neonicotinoid pesticides would not be approved “until new bee data have been submitted and pollinator risk assessments are complete.” (http://www.epa.gov/oppfead1/cb/csb_page/updates/2015/neonic-outdooruse.html) However, April 6th the EPA published a request by a pesticide manufacturer for an experimental use permit for clothianidin on corn in the northwest. The use of this neonicotinoid is not for an “emergency,” but for an experimental outdoor use. The April 2, 2015 letter from EPA to manufacturers clearly declined any new outdoor experimental neonicotinoid uses. The proposed experimental use will be as a soil drench on corn growing outside in corn fields.

Two questions arise: Why would one need to apply clothianidin as a soil insecticide when it is already on every seed as a seed dressing? If the seed coating does not work, why are growers encouraged to purchase pesticide coated seeds? If this experimental use is permitted, the Pollinator Stewardship Council would hope the EPA would use this as an opportunity to gather “new bee data,” and perform “pollinator risk assessments” during this experimental soil drench of clothianidin. Research has found problematic levels of neonicotinoids in the water and soil in the cornbelt. Studies have shown the half-life of neonicotinoids can be up to three years.

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The April 2nd letter from the EPA stated they seek to further protect pollinators by ceasing any new outdoor uses of neonicotinoids. The EPA is requiring new 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.” “Affected neonicotinoid actions 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”

“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.”

“EPA has begun to employ its new risk assessment framework for bees as part of its regulatory decision-making process for all pesticide chemistries. The new framework:

- Relies on a tiered process.
 - The lowest tier (Tier I) is intended to serve as a screening tool. It employs conservative assumptions regarding exposure (i.e., assumptions that are likely to overestimate exposure) and uses the most sensitive toxicity estimates from laboratory studies of individual bees to calculate risk estimates.
 - Higher tiers (Tiers II and III) rely on characterization of risk based on measured exposure values and colony-level effects studies and so are more realistic.

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- Focuses on the major routes of exposure, including contact exposure (e.g., from overspray or direct contact with the pesticide on the plant surface) and dietary exposure (e.g., from consumption of contaminated pollen or nectar).
- Distinguishes different types of pesticide treatments, such as compounds applied to plant leaves or seed/soil-applied (systemic) compounds.”

The Pollinator Stewardship Council commends the EPA for the April 2nd decision, but finds a conflict with the April 6th experimental use request. The real-world exposure of honey bees to neonicotinoids is important data to collect as part of the registration process for new uses of this class of insecticide. In the last thirty-six months tolerance levels /new uses for imidacloprid, clothianidin, thiamethoxam, and dinotefuran have been approved for applications upon:

Pome and Stone fruit	Dinotefuran	Emergency use	EPA-HQ-OPP-2014-0335-002
Pome and stone fruit	Clothianidin	Emergency use	EPA-HQ-OPP-2014-0255-002
Citrus	Clothianidin	Emergency use	EPA-HQ-OPP-2014-0255-001
Pome & Stone fruit	Dinotefuran	residues	EPA-HQ-OPP-2012-0755-003
All food/feed products	Dinotefuran	residues	EPA-HQ-OPP-2012-0092-0004
Tea, pepper	Clothianidin	residues	EPA-HQ-OPP-2011-0860-0005
Tea, coffee	Thiamethoxam	residues	EPA-HQ-OPP-2012-0488-0003
Rice, egg, poultry by-product	Dinotefuran	residues	EPA-HQ-OPP-2012-0060-0005
Berry, watercress, onion, peach, vegetable, sm. fruit, tea leaves	Dinotefuran	residues	EPA-HQ-OPP-2011-0433-0004
Buckwheat, oat, millet, rye, triticale, teosinte, wild rice	Thiamethoxam	residues	EPA-HQ-OPP-2010-1079-0006

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While not all of these are bee attractive crops, field-edges, neighboring fields, and the next crop, which may be a pollinator attractive crop will be affected by the half-life of these neonicotinoid pesticides. The non-emergency uses will remain, as EPA's April 2, 2015 decision affects new uses of neonicotinoids only. (Except for the conflicting April 6th experimental use request.) Neonicotinoids applied to bee attractive crops expose honey bees and native pollinators to lethal and pre-lethal impacts of these systemic pesticides. If the experimental use is approved by the EPA, the study needs to collect quality bee data, and perform pollinator risk assessments of the water flowing out of the furrows. Shallow aquifer studies should be conducted on the drinking water for humans and honey bees. And field edge and neighboring field weed pollen should be analyzed for neonicotinoid levels as well.

The proposed experimental use dates are May 15, 2015 through May 16, 2016 for this soil drench application of clothianidin. The registrant is requesting use on a combined total of 500 Acres in Minnesota, South Dakota and Wisconsin. Last Spring a number of beekeepers kept their bees in California in order to avoid corn planting and the dust-off of neonicotinoids impacting blooming trees, and flowers in the Midwest. This experimental use of an outdoor application of clothianidin may keep beekeepers away from Minnesota, South Dakota, and Wisconsin. Research has shown what is applied to 500 acres, does not stay on those 500 acres.

The bee industry, researchers, and non-governmental organizations have expressed concerns about the wide-spread use of neonicotinoids on bee attractive crops and plants. Research of the real-world exposure of pollinators to neonicotinoids shows these pesticides are problematic to honey bees. Neonicotinoids are *one* of the factors comprising the *over-all* impact of pests, pathogens, pesticides, and poor forage affecting the health of pollinators. Comments concerning this experimental use of clothianidin will be accepted by the EPA at www.Regulations.gov until May 6, 2015 at <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2014-0667-0001>.

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EPA Decision Conflicting-5

EPA letter to pesticide manufacturers <http://www2.epa.gov/pollinator-protection/april-2015-letter-registrants-announcing-new-process-handling-new>

How EPA assesses risk to pollinators and new bee safety studies <http://www2.epa.gov/pollinator-protection/how-we-assess-risks-pollinators#data>

Santa Barbara Creeks Division discussing the detection of imidacloprid in local water sources
http://santabarbara.granicus.com/MediaPlayer.php?view_id=26&clip_id=6652

‘Neonic’ Poison Found Throughout City
Creeks Division Testing After Rains Discovers Insecticide Fatal to Bees
<http://www.independent.com/news/2015/feb/09/neonic-poison-found-throughout-city/>

A Survey of Imidacloprid Levels in Water Sources Potentially Frequented by Honeybees (*Apis mellifera*) in the Eastern USA
<http://rd.springer.com/article/10.1007/s11270-014-2127-2/fulltext.html>

DATA EVALUATION RECORD

HONEY BEE – FIELD TESTING FOR POLLINATORS 9141-5 (OPPTS 850.3040)

1. CHEMICAL: Clothianidin http://pollinatorstewardship.org/wp-content/uploads/2014/12/Clothianidin-EPAmemo2007_2.pdf

Effect of pH and Type of Formulation on the Persistence of Imidacloprid in Water
<http://pollinatorstewardship.org/wp-content/uploads/2014/12/Sarkar-et-al-1999-Effect-of-pH-and-type-of-formulation-on-the-persistence-of-IMI.pdf>

Neonicotinoid contamination of global surface waters and associated risk to aquatic invertebrates: A review
http://pollinatorstewardship.org/wp-content/uploads/2014/12/Morrissey-et-al-2015_Review-neonicotinoids-surface-water-risk-to-aquatic-invertebrates.pdf

A large-scale field study examining effects of exposure to clothianidin seed-treated canola on honey bee colony health, development, and overwintering success
<https://peerj.com/articles/652/#fig-1>

Assessment of the environmental exposure of honeybees to particulate matter containing neonicotinoid insecticides coming from corn coated seeds.
<http://www.ncbi.nlm.nih.gov/pubmed/22292570>

Pesticide-laden dust emission and drift from treated seeds during seed drilling: a review.
http://www.researchgate.net/publication/235777972_Pesticide-laden_dust_emission_and_drift_from_treated_seeds_during_seed_drilling_a_review

Insecticides Similar to Nicotine Widespread in Midwest
<http://www.usgs.gov/newsroom/article.asp?ID=3941#.VDwgWxawQ9I>

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Detections of the Neonicotinoid Insecticide Imidacloprid in Surface Waters of Three Agricultural Regions of California, USA, 2010-2011

<http://www.ncbi.nlm.nih.gov/pubmed/22228315>

Neonicotinoid Concentrations in Arable Soils After Seed Treatment Applications in Preceding Years

<http://smallbluemarble.org.uk/wp-content/uploads/2014/06/Jones-et-al-2014.pdf>

Landscape rates of soil-applied imidacloprid translocated to flowers reduces survival of *Coleomegilla*, *Hippodamia*, and *Coccinella* ladybeetles, but not *Harmonia* ladybeetles, *Danaus plexippus*, and *Vanessa cardui*, butterflies

<http://www.entomology.umn.edu/cues/pollinators/2013%20research%20in%20progress/2013%20June%20butterflies%20beetles.doc>