



Pollinator Stewardship Council

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August 24, 2015

Mr. Michael Goodis, Pesticide Re-evaluation Division
 Marietta Echeverria, Registration Division
 Office of Pesticide Programs
 Environmental Protection Agency Docket Center 28881T
 1200 Pennsylvania Ave., NW
 Washington, D.C. 20460-0001

Re: Bees; Mitigating Exposure from Acutely Toxic Pesticide Products

Docket #: EPA-HQ-OPP-2014-0818-0003

Dear Mr. Goodis and Ms. Echeverria,

The Pollinator Stewardship Council applauds the Environmental Protection Agency's efforts to protect honey bees, but does not believe the proposed New Rule accomplishes this goal. We believe Part A of the proposed **New Rule Mitigating Exposure from Acutely Toxic Pesticide Products** for honey bees under contracted pollination services provides no additional protection to honey bees. Part B of this New Rule, **State and Tribal Managed Pollinator Protection Plans**, does not address the need for sufficient label data, define performance standards, or address the funding necessary for State and Tribal entities to make informed and effective decisions.

Part A. Label Language for Applications to Sites With Bees Present Under Contracted Services

Applications of acutely toxic pesticides to managed honey bees under contract pollination are not the issue. The proposed new rule would prohibit the foliar application of acutely toxic pesticides to a crop while it is in bloom, and honey bees are hired to pollinate the crop. However, pesticide labels already have an adequately protective bee hazard statement, "do not apply or allow residues on blooming crops or weeds if bees are visiting the treatment area." Growers who invest in renting bee hives for crop pollination understand the value of honey bees, and closely follow label instructions. Specialty crop growers will not intentionally harm the livestock that helps create their crop; some beekeepers have additional guidelines written into their contract which protect their rented bees. Beekeepers and growers can control foliar applications through grower agreements and the pesticide label. Growers rely on

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enforceable label language to protect honey bees. Honey bees are already protected now from foliar applications of acute toxicity pesticide products through crop pollination agreements and the pesticide label.

Honey bees face the following issues while providing crop pollination services:

- Adjoining/adjacent/neighboring land in honey bee forage area of contracted crop:
 - Off-site drift of acutely toxic products to blooming crops and weeds.
 - Acutely toxic products being applied when honey bees are actively foraging.
- On land utilizing contracted pollination services:
 - Application of extended residual toxicity products too close to bloom.
 - Tank mixes of pesticide products with unknown synergisms.
 - Exposure to pesticide products that cause chronic effects.
 - Unknown effects of fungicides and Insect Growth Regulators (IGRs)

Off-site drift of acutely toxic products to blooming crops and weeds.

Beekeepers report the greatest risk to honey bees is by acutely toxic pesticide exposures from off-site drift of applications to crops near commercially pollinated crops or from poorly timed mosquito fogging operations. Honey bees will forage many square miles off-site of the contracted pollination area in search of diverse pollen and nectar. These off-site “drift” exposures, and the residual toxicities from these applications of acutely toxic pesticides pose a greater risk to honey bees and should be addressed.

Application of extended residual toxicity products too close to bloom.

Some acutely toxic pesticides are toxic for days or even weeks on the crop during bloom, in the field, and in water run-off from the field. The list of seventy-six acutely toxic compounds affecting more than 1,000 products accompanying the proposed New Rule are known and labelled as such. Additionally, if the acutely toxic pesticides run-off into field furrows, ditches, and field potholes the honey bees will experience cumulative contamination from not just the pollen and nectar, but also the water. A managed honey bee hive consumes a gallon and a half of water a day; water that may be contaminated with sub-lethal and lethal levels of toxic pesticides.^{1,2,3} This New Rule ignores the pesticide’s residual toxicity, and the real-world exposure of honey bees carrying the toxin back to the hive.

Tank mixes of pesticide products with unknown synergisms.

Pesticide products that have become problematic are those that create synergistic chemical interactions when mixed together in a tank, and this mix of pesticides is then applied to the blooming crop.^{4,5,6} The massive bee kills observed during almond pollination in 2014 were the result of legal tank mixes. Tank mixed pesticides with synergized and unknown toxicities need to be addressed.

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Unknown effects of fungicides and Insect Growth Regulators (IGRs)

Other products of concern from singular applications to crops in bloom are fungicides and IGRs. Currently labels in use have been developed using short time standards rather than appropriate tiered testing for use of these products. In the study, Four Common Pesticides, Their Mixtures and a Formulation Solvent in the Hive Environment Have High Oral Toxicity to Honey Bee Larvae found *“chronic dietary exposure to a fungicide, pesticide mixtures, and a formulation solvent have the potential to impact honey bee populations, and warrants further investigation. We suggest that pesticide mixtures in pollen be evaluated by adding their toxicities together, until complete data on interactions can be accumulated.”*⁷

The proposed New Rule does not address the risk assessments of the colony at the organism level.

Part B. State and Tribal Managed Pollinator Protection Plans (MP3)

The Pollinator Stewardship Council is concerned the creation of Managed Pollinator Protection Plans may allow primacy partners to develop plans with guidelines that are less stringent than the federal pesticide label.

This proposed New Rule encourages *“states and tribes to develop MP3s that are effective in reducing the likelihood of bees being present in the treatment area at the time a pesticide application is to be made.”*⁸ This needs to be defined, is this time of day application or is this the idea of moving bees? If this proposed New Rule is as Jim Jones, EPA Asst. Administrator states a *“function of where the bees are,”*⁹ then the proposed new rule must protect bees wherever they are located. However, the EPA will not examine the State MP3s *“for several years.”*¹⁰ EPA needs to define the review process for these MP3 plans as some states have already begun developing their MP3 plans.

States are being tasked with creating Pollinator Protection Plans with little funding support. At a minimum, states need funding for apiary inspectors and lab testing of hive matrices and honey bees.

To support local decision-making relative to pollinator protection State and Tribal entities need:

- Quality label data and language
- Knowledge of inert / other ingredients within pesticide products
- Knowledge of tank mixes to effectively deal with issues associated with adequate label guidelines and synergism of products
- Proper pesticide application timeframe for various crops

Beekeepers should not suffer the loss of their livestock simply because they are not under a crop pollination contract. This would not be tolerated in any other area of agriculture.

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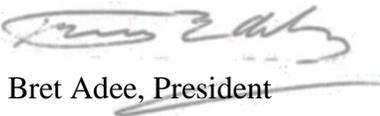
The division of beekeeping “services” into two categories: honey bees under contracted pollination service, and those honey bees not under contracted services, continues to create animosity between agricultural stakeholders, shows that EPA still does not understand the benefits pollinators provide to agriculture and the ecosystem, and still does not protect managed and native pollinators from acutely toxic pesticides. This proposed New Rule addresses only those honey bees and native pollinators under contract for crop pollination services and continues the label language exceptions for honey bees not under contract for crop pollination. EPA states the two scenarios were devised based on “*where bees are brought on site under contract vs. when bees may be present but the grower may not derive a benefit from the presence of bees on his or her property.*”¹¹ Science shows us whether a crop is 100% reliant upon insect pollination, or 10% reliant upon insect pollination, crop yield increases through pollination.¹² Retaining a pesticide label with exceptions to apply acutely toxic pesticides to honey bees not under contract pollination is unacceptable. Clear pesticide label protection guidelines are integral to protecting pollinators.

In conclusion, this New Rule does not provide protection of honey bees and native pollinators, where the risk is incurred. The situations in which pollinators are likely to be affected by pesticides (both acutely toxic and those having chronic effects) are not dealt with at all by the proposed rule.

State Pollinator Protection Plans, if they are adopted, must not undermine pesticide labels. They need to be adequately funded, have measurable standards, be reviewed in a timely fashion, and recognize the value of bees to all agriculture production. Pollinator protection is a national priority, realized at the state and local levels.

The Pollinator Stewardship Council strongly opposes this proposed New Rule as ineffective and potentially damaging to pollinators.

Sincerely,



Bret Adee, President

¹ **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

² **‘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/>

³ **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>

⁴ **High Levels of Miticides and Agrochemicals in North American Apiaries: Implications for Honey Bee Health**
 Christopher A. Mullin , Maryann Frazier, James L. Frazier, Sara Ashcraft, Roger Simonds, Dennis vanEngelsdorp, Jeffery S.

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Pettis , Published: March 19, 2010. DOI: 10.1371/journal.pone.000975,
<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0009754>

⁵ **Overwintered brood comb honey: colony exposure to pesticide residues**, Dr. Nancy Ostiguy and Dr. Brian Eitzer, Journal of Apicultural Research, vol. 53(3) pp. 413-421, July 4, 2014 <http://www.ibra.org.uk/articles/Pesticides-in-brood-comb-honey>

⁶ **Sub-Lethal Effects of Pesticide Residues in Brood Comb on Worker Honey Bee (*Apis mellifera*) Development and Longevity**, Judy Y. Wu, Carol M. Anelli, Walter S. Sheppard mail, Published: February 23, 2011, DOI: 10.1371/journal.pone.0014720 <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0014720>

⁷ **Four Common Pesticides, Their Mixtures and a Formulation Solvent in the Hive Environment Have High Oral Toxicity to Honey Bee Larvae**, Zhu W., Schmehl DR, Millin CA, Frazier JL 2014. PLoS ONE 9:e77547; doi: 10.1371/journal.pone.0077547 <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0077547>

⁸ **EPA's Proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products**, pg. 11
<http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2014-0818-0002>

⁹ **AP NewsBreak: Feds tell farmers to buzz off on pesticides when bees are busy on croplands**, Seth Borenstein, May 28, 2015, <http://www.usnews.com/news/business/articles/2015/05/28/epa-plans-temporary-pesticide-restrictions-while-bees-feed>

¹⁰ Ibid., pg. 15

¹¹ Ibid., pg. 9

¹² **Contribution of insect pollinators to crop yield and quality varies with agricultural intensification**
<https://peerj.com/preprints/184v1.pdf>

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