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March 12, 2015 Contact: Michele Colopy, Program Director progdirector@pollinatorstewardship.org

White House Task Force Asked to Review and Re-Assess

The Pollinator Health Task Force convened by the White House last year is scheduled to release its report early this spring. The bee industry submitted their *Input to the Pollinator Health Task Force on Certain Actions the Task Force Should Consider in Developing a Federal Strategy to Reverse Pollinator Losses and Help Restore Populations to Healthy Levels* last November during the public comment period. The Pollinator Stewardship Council supports the bee industry strategies to improve pollinator health.

- I. The Task Force should continue and expand its formal engagement with the nation's two national beekeeping, honey production and pollination services industry organizations.
- II. The Task Force should include a comprehensive pesticide risk mitigation plan, including Best Management Practices (BMPs), Pesticide Use Registries (PURs), additional research, expedited registration reviews, and improved EPA pesticide labeling in its Federal strategy to reverse honey bee losses, and help restore honey bee populations to healthy levels.
- III. The Task Force should include in its national strategy a substantial increase in resources committed to honey bee health research, and it should call for a re-focus of ongoing research on: more sustainable technologies for crop protection; more effective treatments for honey bee pests and pathogens; geographic diversification of Agricultural Research Service (ARS) laboratory locations; and more field studies of honey bees throughout the year.

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- IV. The Task Force should include in its national strategy a commitment to review Federal conservation programs aimed at increasing honey bee forage, identify possible challenges posed by existing programmatic restrictions or otherwise, and establish uniform national policies on the use of public lands as well as uniform guidance and incentives aimed at substantially increasing available clean forage for commercially managed honey bees on private land.
- V. The Task Force should consider enhancing efforts to stabilize the commercial beekeeping industry while a national strategy is developed and implemented.
- VI. The Task Force should include the two national beekeeping organizations in any publicprivate partnerships formed to address large scale pollinator needs such as nutrition and forage, pesticide risk mitigation and longitudinal, field realistic research.

The Pollinator Stewardship Council additionally encourages the Pollinator Health Task Force to examine the chronic and acute effects of pesticides (herbicides, fungicides, insecticides, adjuvants, surfactants, and "inert" ingredients) upon the ecosystem. A predominance of these chemical products are a high risk to honey bees, specifically neonicotinoids. The Pollinator Stewardship Council would like the White House Pollinator Health Task Force to accelerate the review of neonicotinoids, enacting a moratorium (*definition of "moratorium" -- "a planned activity is postponed.") on their use until longitudinal studies have been completed, and all of the science can be reviewed to determine a full and complete science-based decision concerning their application. We encourage the Task Force to stop registering additional pesticide products of the neonicotinoid class of pesticides until a full review of the research is complete. According to beekeepers' experience, and research, chemical products highly toxic to honey bees are also highly detrimental to the crop pollination services and honey crop production of beekeepers. The Pollinator Stewardship Council encourages the Task Force to work with beekeepers and the beekeeping industry to protect the health of pollinators and this valuable industry which pollinates one in three bites of America's food.

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Input to the Pollinator Health Task Force on Certain Actions the Task Force Should Consider in Developing a Federal Strategy to Reverse Pollinator Losses and Help Restore Populations to Healthy Levels http://pollinatorstewardship.org/wp-content/uploads/2014/12/AHPA-ABF-Stakeholder-Input-to-Pollinator-Task-Force-11-23-14.pdf

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

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/

Safety of neonicotinoids for bees and other creatures unclear: Porter The widely published ad about neonicotinoid safety goes against warnings from scientists about harm for honeybees, other insects http://www.thestar.com/news/world/2015/02/06/safety-of-neonicotinoids-for-bees-and-other-creatures-unclear-

porter.html

The neonicotinoid pesticide imidacloprid and the dithiocarbamate fungicide mancozeb disrupt the pituitarythyroid axis of a wildlife bird

http://pollinatorstewardship.org/wp-content/uploads/2014/12/Pandey-and-Mohanty-2014 Imidacloprid-andmancozeb-disrupt-the-pituitary-thyroid-axis-of-a-bird_Chemosphere.pdf

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) **<u>1. CHEMICAL: Clothianidin</u>**

http://pollinatorstewardship.org/wp-content/uploads/2014/12/Clothianidin-EPAmemo2007 2.pdf

Imidacloprid-treated seed ingestion has lethal effect on adult partridges and reduces both breeding investment and offspring immunity

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New York state bans use of clothianadin (2005)

http://pollinatorstewardship.org/wp-content/uploads/2014/12/new-york-state-clothianidin-letter-2005.pdf

Effect of pH and Type of Formulation on the Persistence of Imidacloprid in Water

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White House Task Force Asked to Review and Re-Assess-4

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

ENVIRONMENTAL SCIENCE, The trouble with neonicotinoids, by Francisco Sánchez-Bayo, Science 14 November 2014: Vol. 346 no. 6211 pp. 806-807 DOI: 10.1126/science.1259159 Perspective http://pollinatorstewardship.org/wp-content/uploads/2014/12/The-Trouble-with-Neonics.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

Evaluation of seed treatment insecticides for management of the rice water weevil, Lissorhoptrus oryzophilus Kuschel (Coleoptera: Curculionidae), in commercial rice fields in Louisiana http://pollinatorstewardship.org/wp-content/uploads/2014/12/Hummel-et-al-2014Evaluation-of-seed-treatmentinsecticides-for-management-of-rice-water-weevil-in-Loisiana CropProt.pdf

A review of the direct and indirect effects of nenicotinoids and fipronil on vertebrate wildlife <u>http://link.springer.com/article/10.1007%2Fs11356-014-3180-5#page-2</u>

Neonicotinoids interfere with specific components of navigation in honey bees http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0091364

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_Pesticideladen dust emission and drift from treated seeds during seed drilling a review

Neonicotinoids in bees: a review on concentrations, side-effects and risk assessment http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3338325/

Insecticides Similar to Nicotine Widespread in Midwest http://www.usgs.gov/newsroom/article.asp?ID=3941#.VDwgWxawQ91

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

Effect of soil application of imidacloprid on survival of adult green lacewing, Chrysoperla carnea (Neuroptera: Chrysopidae), used for biological control in greenhouse http://pollinatorstewardship.org/wp-content/uploads/2014/09/Rogers_et_al-_2007_Effect-of-soil-applied-

imidacloprid-on-green-lacewing-used-in-greenhouse-biological-control BioCont.pdf

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

http://www.entomology.umn.edu/cues/pollinators/2013%20research%20in%20progress/2013%20June%20butterflie slady%20beetles.doc

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White House Task Force Asked to Review and Re-Assess-5

Imidacloprid contaminates the pollen of seed-coated crops : A high risk for bees

PDF slideshow presented at Apimondia (World Bee Congress) in 2009 by Dr Bonmatin of CNRS France.

NEONICOTINOIDS: INDEX OF RELATIVE TOXICITY; WHERE DDT IS 'INDEX ONE

<u>This slide was presented during the APIMONDIA World Congress</u>, in 2009 in Montpellier, France, by Dr. Bonmatin Jean-Marc, Researcher at Centre National de la Recherche Scientifique. The data was extracted from peer-reviewed literature and is well established in the scientific literature.

No waxy residue for bees: Detecting neonicotinoid insecticides with CE-MS

http://www.separationsnow.com/details/ezine/147da282156/No-waxy-residue-for-bees-Detecting-neonicotinoid-insecticides-with-CE-MS.html?tzcheck=1

Neonic insecticides widespread in Iowa waters -study http://www.reuters.com/article/2014/07/24/usa-agriculture-insecticides-study-idUSL2N0PZ1ZN20140724

Insecticides Similar to Nicotine Widespread in Midwest http://www.usgs.gov/newsroom/article.asp?ID=3941#.U9F28UYRRes

Risks of large-scale use of systemic insecticides to ecosystem functioning and services <u>http://link.springer.com/article/10.1007%2Fs11356-014-3277-x#page-1</u>

European Food Safety Authority: clothianidin http://www.efsa.europa.eu/en/publications.htm?text=clothianidin

Neonicotinoids appear to have devastating effects across the natural world: we need a global moratorium. http://www.monbiot.com/2014/07/15/another-silent-spring/

Potential Exposure of Pollinators to Neonicotinoid Insecticides from the Use of Insecticide Seed Treatments in the Mid-Southern United States.

http://www.ncbi.nlm.nih.gov/pubmed/25010122

Bee-harming 'neonicotinoid' pesticides also hurt bird populations: study <u>http://www.rawstory.com/rs/2014/07/10/bee-harming-neonicotinoid-pesticides-also-hurt-bird-populations-study/</u>

Exposure to neonicotinoids influences the motor function of adult worker honeybees <u>http://link.springer.com/article/10.1007%2Fs10646-014-1283-x#page-1</u>

Conclusions of the Worldwide Integrated Assessment on the risks of neonicotinoids and fipronil to biodiversity and ecosystem functioning

http://www.lpo.fr/images/Presse/cp/2014/impact pesticides/WIA The following is a summary of the conclusio ns chapter_that_will_appear_in_Environmental_Sciences_and_Pollution_Research.pdf

<u>A review of the direct and indirect effects of neonicotinoids and fipronil on vertebrate wildlife</u> <u>http://pollinatorstewardship.org/wp-content/uploads/2014/06/Gibbons-et-al_2014_Review-of-direct-and-indirect-effects-of-neonicotinoids-and-fipronil-on-vertebrate-wildlife_EnvSciPollRes.pdf</u>

Systemic pesticides pose global threat to biodiversity and ecosystem services http://www.iucn.org/?uNewsID=16025

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A Critique of Dr. Richard Heintzelman, Dr. Iain D. Kelly, Dr. David L. Fischer, Dr. Christian Maus, 23 May 2012 Overview of Recent Publications on Neonicotinoids and Pollinators

http://beyondpesticides.org/pollinators/documents/CritiqueofHeintzelmanetalJLF.pdf

Harvard study points to neonics as cause of bee deaths

http://barrie.ctvnews.ca/harvard-study-points-to-neonicotinoids-as-cause-of-bee-deaths-1.1840869

New science on neonicotinoids

https://www.pesticideresearch.com/site/?p=10462

Influence of dinotefuran and clothianidin on a bee colony (2012) by Toshiro Yamada–Kazuko Yamada–Naoki Wada

 $\label{eq:http://pollinatorstewardship.org/wp-content/uploads/2014/07/Yamada-et-al-2012-Influence-of-dinotefuran-and-clothianidin-on-a-bee-colony-Ppn-J-Clin-Ecol-211-10-23.pdf$

Neonicotinoid Concentrations in Arable Soils After Seed Treatment Applications in Preceding Years http://onlinelibrary.wiley.com/doi/10.1002/ps.3836/abstract

USA finally considering action over neonicotinoids, spurred on by doubts as to whether they actually work 2 June 2014, by Dave Goulson (University of Sussex blog)

http://splash.sussex.ac.uk/blog/for/dg229/2014/06/02/usa-finally-considering-action-over-neonicotinoids-spurredon-by-doubts-as-to-whether-they-actually-work

Scientists investigating tolerance to thiamethoxam in Mid-South

http://deltafarmpress.com/cotton/scientists-investigating-tolerance-thiamethoxam-mid-south

Neonicotinoid seed treatments and honey bee health

http://www.extension.org/pages/65034/neonicotinoid-seed-treatments-and-honey-bee-health#.U38wcV6aBSU

Environmental fate of soil applied neonicotinoid insecticides in an irrigated potato agrosystem http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0097081

Purdue expert warns of potential bee kills

http://wlfi.com/2014/05/07/purdue-expert-warns-of-potential-bee-kills/

Sub-lethal exposure to neonicotinoids impaired honey bees

winterization before proceeding to colony collapse disorder

http://www.bulletinofinsectology.org/pdfarticles/vol67-2014-125-130lu.pdf

Analysis of Neonicotinoid Pesticides in Wetland Water and Sediments by ESI-

LC/MS/MS http://www.traceorganic.com/2013/presentations/JBailey%202013 WCTOW.pdf

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

<u>Perspectives from the Prairies: Uncovering the facts about neonicotinoid insecticides on wetland ecosystems</u> <u>http://pollinatorstewardship.org/wp-content/uploads/2014/03/Morrissey Pesticides-and-Prairie-wetlands CWS-ppt_Feb-28-2014.pdf</u>

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Macro-Invertebrate Decline in Surface Water Polluted with Imidacloprid <u>http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0062374</u>

Beyond the Birds and the Bees: Effects of Neonicotinoids on Agriculturally Important Beneficial Invertebrates <u>http://www.xerces.org/wp-content/uploads/2013/09/XercesSociety_CBCneonics_sep2013.pdf</u>

Neonicotinoids Let Virus Thrive in Bees <u>http://www.rsc.org/chemistryworld/2013/10/neonicotinoids-let-virus-thrive-bees-colony-collapse-disorder</u>

Lethal and sublethal effects of imidacloprid, after chronic exposure, on the insect model Drosophila melanogaster <u>http://pubs.acs.org/doi/abs/10.1021/es405331c</u>

Chronic exposure of imidacloprid and clothianidin reduce queen survival, foraging and nectar storing in colonies of *Bombus impatiens* <u>http://conservancy.umn.edu/handle/11299/160291</u>

Neonicotinoid Pesticides Harm Bees' Foodgathering Ability <u>http://ens-newswire.com/2014/01/29/neonicotinoid-pesticides-harm-bees-foodgathering-ability/</u>

A meta-analysis of experiments testing the effects of a neonicotinoid insecticide (imidacloprid) on honey bees http://www.ncbi.nlm.nih.gov/pubmed/21080222

Field realistic doses of pesticide imidacloprid reduce bumblebee pollen foraging efficiency http://link.springer.com/article/10.1007%2Fs10646-014-1189-7#page-1

Neonicotinoid clothianidin adversely affects insect immunity and promotes replication of a viral pathogen in honey bees http://www.pnas.org/content/early/2013/10/18/1314923110

Neonicotinoid Pesticides and Honey Bees: a fact sheet http://cru.cahe.wsu.edu/CEPublications/FS122E/FS122E.pdf

Environmental fate of neonicotinoids: a potato case study <u>http://www.soils.wisc.edu/extension/wcmc/2013/pap/Huseth.pdf</u>

Impacts of a neonicotinoid, neonicotinoid–pyrethroid premix, and anthranilic diamide insecticide on four species of turf inhabiting beneficial insects <u>http://www.ncbi.nlm.nih.gov/pubmed/24493235</u>

Risk posed to honeybees (Apis mellifera L, Hymenoptera) by an imidacloprid seed dressing of sunflowers <u>http://www.ncbi.nlm.nih.gov/pubmed/11455652</u>

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Sublethal neonicotinoid insecticide exposure reduces solitary bee reproductive success http://onlinelibrary.wiley.com/doi/10.1111/afe.12041/abstract

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