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Nov. 13, 2017

Michael L. Poe
Office of Budget and Program Analysis
USDA
Jamie L. Whitten Building, Rm. 101-A
1400 Independence Ave., SW
Washington, DC

Re: USDA-2017-0002-0001—Identifying Regulatory Reform Initiatives

Dear Mr. Poe,

We have expressed similar concerns of regulatory reform to the EPA during their public comment on this issue. EPA and USDA actions do affect the health of honey bees, beekeepers, and native pollinators. Regulation reform can be addressed to reduce redundancy or conflict within current regulations. However, regulations become necessary to protect the economies of *off-target* industries. The actions to protect a crop from a pest, or introduce biologicals for pest control will have impacts upon non-target beneficial insects and other plant life. Regulations, like pesticide labels, are necessary to mitigate risk to all.

While awareness of honey bees and native pollinators has increased, and pesticide label language has been modified toward protecting pollinators, they are still not protected from the impact of pesticides. Pollinators especially are not protected from pesticides coated onto seeds.

Communication across stakeholders has increased, and state pollinator protection plans have been created, but these efforts are best management practices, and have no funding support or enforcement to encourage the best management to support the health of pollinators.

Last year's winter loss of managed bees was nearly 30% with an annual loss of 44%. This clearly indicates the nations' managed honey bees are not healthy, and nothing significant has been done to reduce the impact of pesticides.

Introduction

Pollinator poisoning can occur whenever toxins are present in the floral resources that the pollinators are relying on for nutrition, or when encountered in seeking water, as well as from direct exposure from applications when bees are present. Poisoning events with honey bees may result in immediate death of the colony, but more often they result in weakening and diminishing the functioning of the colony. Chemical poisoning of a colony of honey bees manifests itself in many ways throughout a season, including: reproductive issues with both male and female bees, depleted field force populations, diminished cognitive capacity, and reduced immune responses which can open the door to a host of viral and pathogenic ailments, as well as exacerbating Varroa mite loads. All of these effects contribute to both lower over-winter survival rates and colony failures throughout the year.

Immediate Actions Required to Limit Exposure
Pollinator poisoning is the central issue, which must be addressed if we are to reverse the dangerous downward trend in pollinator health. *Specific steps are needed:*

Support a Moratorium on Insecticidal Seed Coatings. We support an immediate moratorium on insecticidal seed coatings applied to pollinator-attractive crops in the US. Honey bee poisoning events continue to occur, caused by lethal dust drifting from insecticide coated seed plantings. This is not a new problem, and although some steps were taken to solve this issue, incidents continue to occur every year. One end result should be increased use of biologically based IPM practices and less prophylactic pesticide use, which would decrease the occurrence of pesticides in the environment generally.

The label language for neonicotinoids, which we challenged back in 2013, remains a very serious issue. The list of exemptions that allow applications to proceed in that label language are merely loopholes that allow bee kills to occur legally. The exemption of a 48 hour notification program should not be reason to allow legal applications of toxic products to blooming plants. It is impossible to move, cover, or otherwise protect all honey bee colonies within the area of pesticide applications to blooming plants. The California Dept. of Pesticide Regulation allows applications of bee toxic products 48 hours after notification as long as all label restrictions are followed. The 2013 EPA pesticide label language releases the applicator from liability as long as the notification is made! The exemption that a pesticide application is recommended based on the threat of significant crop loss, permits any application. The exemption of applications of long residual products after sunset may save a few bees, but will likely kill many bees in the ensuing days of residual activity.

Scientists Must Be Allowed to Do Their Work Free of Political Interference. Scientific research is critical to a comprehensive understanding of the role(s) of pesticides in colony decline. Researchers must have freedom of discovery and freedom to publish their work. While the current and planned research funding for pollinator health is completely inadequate for a time-critical resolution to the bee crisis, we strongly recommend that the acquisition of all funding be tied to a 'hands off our researchers policy.'

Create a Beekeeper Committee to Meet Regularly and Communicate Beekeeper Needs to USDA Bee Labs. The current beekeeper/bee lab liaison system is not adequately addressing critical bee issues. Bee industry leadership needs to be able to communicate directly with bee lab supervisors, and supervisors two or three levels above the lab research leaders, in order to coordinate efforts between labs to avoid duplicative efforts and to assure pollinator research needs are being met. Also, USDA should create an appointed beekeeper/stakeholder board to advise lab supervisors, and report to Congress if research isn't addressing critical needs in a timely manner.

Changes in application practices needed. We applaud the idea of the current EPA proposal to further prohibit the use of acutely toxic pesticides while bees are present under pollination contract. However, this pesticide label proposal does not protect those honey bees *not* under contract for crop pollination, nor does it protect bees from pesticide coated seed dust-off exposure. All pollinators provide this vital ecosystem service in backyards, cities, parks, and wild lands. Pollinator protection must refocus toward:

- Emphasizing short residual toxicity pesticides in place of long RT pesticides in all pollinator-attractive crops, not just commercially pollinated crops.
- Supporting reevaluation of the EPA PR 2000 Notice that deals with RT25's and work toward implementation on all pesticide labels
- Educating growers/applicators on avoiding bee kills by using night spraying

Toxicology testing should be expanded to include all ingredients applied by growers/applicators. Some inerts have recently been implicated in adverse effects on bee health. Risk evaluations and toxicity testing should be performed with marketed products sold to consumers; including those pesticides coated onto seeds.

State Pollinator Protection Plans promotion of apiary registration as a risk mitigation strategy is ineffective. This risk mitigation strategy is voluntary, and becomes an unofficial process that justifies the poisoning of managed bee hives once notification is given to the beekeeper. This tactic is too limited in scope to mitigate off target impacts to native beneficial pollinators. Short residual pesticides and biologically based IPM practices should be adopted to preserve the pollinators and their benefits to the ecosystem. Managed Pollinator Protection Plans (MP3s) are good for establishing communication between beekeepers and pesticide applicators, but they are not the answer to solving honey bee/pesticide issues. Clear, enforceable label language which prohibits the application of certain bee toxic compounds to blooming plants is the basis for effective pollinator protection. Pesticide coated seeds also need clear, enforceable label language to protect pollinators from dust off of systemic bee toxic pesticides.

Unnecessary herbicide use on public lands and rights-of-way should be stopped immediately. Currently, states and counties are using herbicides extensively on public lands and rights-of-way that would otherwise support pollinator forage. These applications should be reduced to the lowest level possible. This effort should go hand-in-hand with a redefinition of "invasive plants," and a complete rethinking of government efforts to eradicate them. Many plants deemed "invasive," are simply opportunistic; when native plants have been eradicated due

to over-use of herbicides, then those plants resistant to herbicides take the opportunity to expand their growing area. Pollinator supportive plants, such as clover, should remain in forage area until native plants beneficial to pollinators can be restored.

Terramycin and honey bee health
While food safety is important for all beekeepers who are managing America's honey crop, the regulatory changes to the applications to terramycin for bee disease have become problematic. The federal regulatory agencies ill-prepared veterinarians and beekeepers over the control and application of this antibiotic for the health management of honey bees. We encourage USDA and FDA to work with beekeepers and veterinarians to protect the health of honey bees and the food supply. The current system requiring beekeepers to secure a prescription from a veterinarian for antibiotics for their honey bees is unmanageable.

Longer-Term Reforms Needed
Implementation of needed reforms in how pesticides are registered and regulated are necessary as well, which includes:

Toxicity testing of formulated products and tank mixtures of formulated products must be required for registration purposes. Information based on a single active ingredient is both inadequate and unrepresentative of normal agricultural uses. Formulations and synergists, as used in the field change toxicity, and must be recognized and addressed directly. All risk assessments should be conducted on formulated products, not simply the active ingredient. The risk assessments of insect growth regulators, fungicides, and common tank mixes need to be reassessed for their negative impact upon brood development. Every year damage to bee hives in the form of brood loss occurs. This unnecessary injury occurs due to the lack of appropriate warning statements on the labels of these products. Rick Keigwin and the EPA Office of Pesticide Programs staff have indicated that risk assessments should start later this year on common tank mixes. Pollinator Stewardship Council is supportive of risk assessments on tank mixes.

A new model for local enforcement of pesticide laws and regulations is needed.
Currently no impartial referees exist in the field to oversee and ensure the "fair and evenhanded" use of chemical products. State Lead Agencies (SLAs) should be replaced as primary enforcers of pesticide laws with an organization that can provide impartial oversight. Of the 50 states, 43 SLAs are departments of agriculture. Agents of state fish and wildlife enforcement or human health may be a more impartial party to enforce such laws, once training is done and budgets shifted.

Greatly expanded monitoring of toxins entering the environment and beehives must be immediately implemented. Knowledge is power, and gathering more field data is required to understand the levels of pesticide uptake occurring. Some of the White House Task Forces' increased research spending could operate a much larger version of Bee Informed Partnership's tech team hive monitoring, contingent on the inclusion of pesticides and their degradation products as part of that monitoring.

An independent system for pesticide toxicity and risk assessment is needed. *The practice of allowing chemical registrants to perform tests on the safety of their own products is inherently a conflict of interest.* An independent third party such as a university or government lab overseen by a representative body of scientists without a conflict of interest should be charged with testing all current use pesticides for honey bee toxicity using standardized methodologies that have been peer-reviewed and determined to be acceptable. Risk assessment protocols should be developed and overseen by an independent scientific group. Peer reviewed assessment of results should include oversight of experimental methods, such as assuring control insects in toxicity tests survive the experiments and proper sample sizes. Data and methods from such studies should be open to peer review, public scrutiny, and feedback.

Comprehensive cost-benefit / efficacy analysis should always be done before pesticide registrations are approved. Currently only evaluations of a portion of the economic benefits of a pesticide registration are conducted. The direct costs of how pesticide use impacts the environment must be considered. If potential damages exceed potential benefits, the application should not be approved. This should also be a consideration in registration reviews, as recent studies have shown some common pesticides have less monetary benefit than the cost of the pesticide.

Comprehensive evaluation of the potential for adverse effects of RNAi-based pesticides must be done before any product registrations are approved. Recent work shows potential for unintended gene silencing of pesticidal RNAi in the honey bee genome, with numerous gene targets sharing sequence homology with all tested pesticidal RNAi compounds. Regulators should not allow any use of these products without full knowledge of potential effects, and should not register any of these products unless there is a complete data set from long-term studies demonstrating no adverse impact on honey bees.

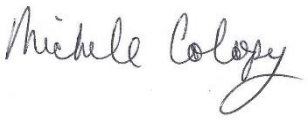
The effect of fungicides and herbicides on the honey bee microbiome should be fully investigated. The honey bee relies heavily on naturally occurring bacteria, fungi, and other microbes in the gut and in the hive. The nature of disruption of these microbial populations by fungicides and herbicides should be studied intensively to better understand the sub-lethal effects of these groups of pesticides normally thought to have low toxicity to honey bees.

Looking to the Future

Strong actions must be taken to restore the bee industry to health. Pesticide poisonings must be addressed. Beekeepers value deeply the relationships they have developed over the years with farmers, ranchers, and specialty crop producers. Because beekeepers need to maintain this vitally important bond, the vast majority of honey bee poisonings go unreported. It should not be assumed that merely because something is not reported, that it is not a major problem. A culture of silence on the issue of pesticide poisonings has developed. A dedicated group of beekeepers, comprised of experts in the field of pesticide hazards, working closely with scientific advisers and other groups who are interested in solving the problem of unsustainable colony losses by evaluating all stressors, including pesticides, is a formula for success.

Given all the bee health problems the bee industry continues to face, we need real protection from pesticide exposure through greater label restrictions, not less! We need clear, concise language on pesticide labels and pesticide coated seed labels. We need the regulations which guide science-based data collection in the review of currently registered pesticides, and any proposed pesticide registrations.

Sincerely,



Michele Colopy
Program Director