

**THE AMERICAN HONEY PRODUCERS ASSOCIATION  
THE AMERICAN BEEKEEPING FEDERATION**

November 24, 2014

**VIA ELECTRONIC SUBMISSION**

Attn: Joseph Nevola  
Pesticide Re-Evaluation Division (7508P)  
Office of Pesticide Programs  
Environmental Protection Agency  
1200 Pennsylvania Ave. N.W.  
Washington, DC 20460-0001  
Submitted to Docket ID #EPA-HQ-OPP-2014-0806<sup>1</sup>

Re: Request for Stakeholder 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, per Docket ID #EPA-HQ-OPP-2014-0806.

Dear Mr. Nevola:

The American Honey Producers Association and the American Beekeeping Federation appreciate the opportunity to provide ongoing stakeholder input to the Pollinator Health Task Force (“Task Force”), particularly with regard to activities that the Task Force is considering to address the large scale challenges faced by the American beekeeping, honey production and pollination services industries.

As the Task Force is aware, while large scale commercial honey bee operations share many concerns with the broader pollinator community, our industry is faced with particularly complex and vexing challenges unique to commercial operations. This letter builds upon a letter our two organizations submitted to the White House earlier this year, and it recommends constructive steps we think the Federal Government can take to improve honey bee health and increase honey bee populations for the benefit of American agricultural production. As the national organizations representing beekeepers ranging in size from hobbyist on up to the very largest of commercial operations, we are committed to working with the Administration, Congress and stakeholders of all stripes to end this most serious of threats to our nation’s honey bees and the very food supply they are responsible for pollinating.

In response to the request for stakeholder input to the Task Force on actions it should consider in developing a federal strategy to reverse pollinator losses and help restore populations to healthy levels, we jointly submit the following comments and we look forward to adding further detail as discussions advance, the “National Pollinator Health Strategy” is produced, policies are developed, and actions are taken to implement those policies.

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<sup>1</sup> See 79 FR 65654 (November 5, 2014).

**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.**

Before addressing the substantive issues in a categorical fashion, we strongly recommend, as a foundational matter, that the Task Force include in its national strategy a formalized stakeholder committee for the purposes of enhancing public-private communication necessary to carry out the strategy. Such a committee should include at least the two national beekeeping, honey production and crop pollination services industry organizations – the American Honey Producers Association and the American Beekeeping Federation. It should also include a designated external affairs officer and an open docket, including a listserv for information sharing between key stakeholders and federal agencies. Uniform notification of stakeholders on strategy developments, presentations, program and policy changes, comment periods, and implementation timelines would go a long way in ensuring all parties are best leveraging limited resources and bandwidth.

While no system is perfect, what we are recommending is at least one step beyond the current public notice system and toward a more formalized “Pollinator Health Strategy” communications portal with an accompanying point of contact. The result, we believe, would be better coordination, more efficient communications, and better long term outcomes. And to that end, we are encouraged by recent discussions between the Natural Resources Conservation Service (NRCS), the Farm Services Agency (FSA) and our two organizations about a Memorandum of Understanding (MOU) and the accompanying enhanced collaborative effort we expect to flow from that MOU. We welcome the same level of relationship across the United States Department of Agriculture (USDA), the United States Environmental Protection Agency (EPA) and other Task Force agencies.

**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.**

- i. Best Management Practices, or BMPs, can be developed and implemented nationally alongside Pesticide Use Registries, or PURs, to minimize the misuse and misapplication of pesticides.*

Better pesticide application practices can lessen harm to honey bees. USDA and EPA should work together to develop a best management practices program (“BMP”) complete with educational materials designed to reinforce the use of Integrated Pest Management techniques and reduce the amount of harmful pesticides used. In following better practices, applicators can not only protect honey bees but reduce the cost of controlling target species. Such a program should educate agricultural pesticide applicators on properly interpreting pollinator protection labels and the serious implications for honey bees and other pollinators if they fail to apply according to those labels, particularly when crops are in bloom and pollinators are present. To ensure better success, USDA and EPA should work with state departments of agriculture and other State Lead Agencies to provide better training programs for licensed applicators with the goal of reducing amounts of insecticides, herbicides, insect growth regulators, fungicides and other pest control technologies placed into the environment. Finally, the program should include a public education component on the value of pollinators to agriculture and the environment as well as measures required to promote and protect those pollinators, including lessening the use of pesticides and proper application when using them.

With those general suggestions in mind, we are aware of a number of efforts across the country

to establish BMPs, including the development of state by state managed pollinator protection plans. In fact, EPA itself recently sent letters to SFIREG, AAPCO and TPPC expressing interest in working with its co-regulators in developing such plans. And as a concept, we share EPA's commitment in working with other stakeholders in developing effective managed pollinator protection plans that reduce honey bee exposures while maintaining flexibility for growers to protect their crops. However, while we appreciate what appears to be a sincere effort to improve communications between growers, applicators and beekeepers, and to avoid unnecessary and potentially harmful pesticide applications, we have concerns with particular components of plans currently under development.

Specifically, beekeepers are concerned that the cornerstone elements of most of these plans - establishing bee registries and providing 48 hour notification for beekeepers to move or cover their hives - could result in a disproportionate burden on the beekeeper, reduction in yield benefits for bee attractive crops, and no guarantee of reducing bee kills. We agree that registries themselves are a valuable tool to improve awareness and communication. And we agree that a 48 hour notice is a substantial improvement over many current practices. However, it is not always feasible for beekeepers to simply move or cover their bees, particularly since the next location may be just as hazardous as the one they are leaving. In fact, in a state like North Dakota where apiaries are densely distributed, the most likely scenario for a beekeeper moving its bees is to go from one spray area into another. Add to that an increasing body of scientific evidence calling into question the safety of systemic pesticides for honey bees, which may be toxic for much longer periods of time, and we could have a scenario where beekeepers are placing their bees in inestimable harm by moving them into systemically treated area to avoid an acute spray that could otherwise have been managed with the bees remaining on or near the grower's land.

Even where bees can feasibly be moved, continual moving or covering renders them ineffective as pollinators and risks further nutritional challenges for bees that have to be given more and more of a supplemental feed diet in lieu of forage. This only serves to externalize costs and shift expenses from one stakeholder (the pesticide applicator/grower) to others (the beekeeper and neighboring growers that would otherwise see crop yield benefits from pollination). Perhaps this is the reason that California's voluntary beekeeper/pesticide notification system, which has been in effect for several decades, generally DOES NOT result in bee hive movement. Instead, pesticide applicators notify registered beekeepers within one mile of bee toxic applications so that beekeepers are aware of risks and can take precautions, but does not assume the hives will be moved. Many pesticide applicators apply certain bee-toxic pesticides at night in order to reduce or minimize bee hazard. Applying short residual toxicity products to crops either very late in the day or after sundown minimizes risk to hives and should be encouraged in all BMPs. In the California case, if the beekeeper chooses not to move, cover, or otherwise protect the bee hives, the pesticide application can proceed as long as it complies with all restrictions of the pesticide label.

Any plan that includes a registry requirement for beekeepers should also include pesticide usage reporting by growers and applicators so that beekeepers and state investigators can know where applications occur and when. California has mandatory pesticide use reporting that is recognized as the most comprehensive in the world.<sup>2</sup> It allows beekeepers and investigators to know what chemicals were in use in the vicinity of a loss. Having a national use registry like the one in California could improve incident investigations by arming beekeepers and investigators alike with more reliable data about what the likely cause is. A national use registry could also reduce the cost of investigations by better targeting residue testing and indeed investigations as a whole. And finally, such a registry would

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<sup>2</sup> See: <http://www.cdpr.ca.gov/docs/pur/purmain.htm>

provide Federal agencies, including the EPA, with better data for risk assessment and other essential registration and programmatic activities seeking to balance the interests of agricultural production with pollinators. Without use reporting, particularly considering the great distances honey bees travel to forage, determining what chemicals bees may have been exposed to is a daunting task for beekeepers. With use reporting available, beekeepers are better equipped to undertake hive management and risk mitigation activities as well as to provide meaningful and informed incident reports. In brief, while we support ongoing efforts to establish BMPs that are workable for producers and beekeepers alike, we think it is important to raise these significant concerns that, unless addressed, could undermine success.

State managed pollinator protection plans aside, the importance of clear, enforceable label language that protects pollinators cannot be overemphasized. Said another way, the label is the law. No registry and notification plan, even one that includes a California-like usage registry as part of the plan, should ever relieve liability for misapplication or misuse under the US EPA label requirements. Robust education campaigns inclusive of training materials and guidance should be undertaken at the federal level to emphasize to growers/applicators the importance following labels, communicating with beekeepers under BMPs, and reporting to PURs. Such a campaign must also reach State Lead Agencies in order to promote the need for states to dedicate resources to investigations and reporting to EPA on a consistent basis.

Finally, the Task Force should consider new restrictions on pesticide applicator work hours as well as incentives for improved mechanical application technologies. Pesticide application is a challenging job, requiring long hours, physical demands and health risks. To mitigate the risk of misapplications and the resulting potential harm to workers, growers and non-target species, we recommend restrictions on consecutive applicator work hours similar to those applied to federal highway workers. Further, we believe mechanical application can be improved significantly with software designed to prevent harmful tank mixes and poorly timed foliar applications, among other unintended incidences. We strongly encourage the Task Force to work with applicators, beekeepers and technology providers to improve development and use of new mechanical application tools and technologies.

ii. *The Environmental Protection Agency (EPA) should better protect honey bees and all pollinator species while ensuring sufficient crop protection through improved risk assessment and clearer label language, among other things.*

EPA should adopt the “tiered testing protocols” for assessment of risk when new pesticides are being considered for registration. Pesticides should not be fast tracked for release through the “conditional registration” process, as were the entire family of neonicotinoid formulations. And while neither of our organizations have taken the position that these types of pesticide registrations should be cancelled, we remain concerned that the process for registration leaves users and stakeholders with insufficient information about potential and real harm they may cause to non-target species such as honey bees.

One particular concern we have with neonicotinoids is “dusting” that occurs when treated seeds are planted. The “dust” is not utilized by the target plant, but is lost to the wind and may be absorbed by other non target species in the process. While work is ongoing to address this, more can always be done. We encourage EPA to work with our organizations and with researchers to monitor results and to assess whether new advancements and mitigation strategies are effective in lowering risk to honey bees.

Another of our concerns is what appears to be a gap in research considered by EPA in its prior risk assessments on neonicotinoid compounds. In particular, emerging science is suggesting that seed treatments are causing chemical build up in soils due to their slow degradation, and further that very low levels of exposure can cause increased mortality in all stages of bee development when combined with honey bee pathogens. Other science has suggested that these compounds can increase pathogen levels in honey bee colonies and affect the immune response of bees.<sup>3</sup> Whether these conclusions are accurate or not, many questions continue to be raised about registrant and/or chemical industry studies that claim no harm to honey bees.<sup>4</sup> In particular, questions have been raised about testing protocols utilized in such studies that are insufficient to accurately assess risk in regard to these compounds. To avoid a bias in testing protocols and the data produced, more federal research should be conducted prior to and after registration and less reliance should be placed upon registrant research. In the short term, and in the case of pollinators, the Task Force / EPA should now provide guidance or protocols for properly assessing long term effects of pesticides, particularly neonicotinoids and other systemic pesticides that remain in plant tissue. EPA should also conclude by the end of 2015 an interim administrative review to evaluate, on the basis of all available peer-reviewed research<sup>5</sup>, the threat that neonicotinoids pose to honey bees.

In the longer term, the Task Force / EPA should consider whether prioritization of “good laboratory practices”, or GLPs, for safety testing of agrichemicals potentially skews the data that EPA uses to evaluate non-target effects of pesticides. The process of conducting experiments using GLPs fundamentally makes sense, but not when they become so stringent that the only laboratories that can abide by them are those that are registering the products. Aspects of the current GLP standards (e.g., Klimisch scores) used to evaluate the strength of data were devised by the chemical companies themselves. While it makes sense that the chemical industry would require expertise in this area, it also represents a serious potential conflict of interest. Under this scenario, the experimental-ranking systems can become rigid to the point where the data most valued by the EPA is provided by those companies seeking product registration. Beekeepers do not presume to be scientists, nor do we suggest that the EPA rely on weak data to evaluate the safety of new pesticides and pollutants. Rather, we are reflecting what we have consistently heard from reliable and trusted research scientists across the country. As such, we encourage EPA to critically evaluate industry-provided data on the safety of their own products under review, and further to provide the means whereby independent, public sector researchers can conduct safety testing using GLPs and validate industry-provided data. One way of doing this would be to provide a grant program through which public sector researchers could apply to help fund GLP adherence in independently conducted research. These steps would go a long way in increasing the credibility of current safety assessments for pesticides, and frankly, would help regain our full confidence in EPA's risk assessment model.

In addition to reviewing registration processes and testing protocols, EPA should review

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<sup>3</sup> Bees Under stress: sublethal doses of a neonicotinoid pesticide and pathogens interact to elevate honey bee mortality across the life cycle: Vincent Doublet, Maureen Labarussias, Joachim R. de Miranda, Robin F. A. Moritz, and Robert J. Paxton; Institut für Biologie, Martin-Luther-Universität Halle-Wittenberg, Halle (Saale), Germany; Department of Ecology, Swedish University of Agricultural Sciences, Uppsala, Sweden; German Center for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig, Leipzig, Germany; School of Biological Sciences, Queen's University Belfast, Belfast, UK.

<sup>4</sup> Neonicotinoids, bee disorders and the sustainability of pollinator services: Jeroen P van der Sluijs, Noa Simon-Delso, Dave Goulson, Laura Maxim, Jean-Marc Bonmatin and Luc P Belzunces.

<sup>5</sup> See: “The Worldwide Integrated Assessment of the Impact of Systemic Pesticides on Biodiversity and Ecosystems” review of 800 studies at: <http://www.tfsp.info/worldwide-integrated-assessment/>

existing pesticide labels to ensure they are adequately protecting pollinators. It is our view that pesticide labels are currently inadequate in providing protection for honey bees. Labels should provide specific warnings against application of pesticides known to be toxic to honey bees and beneficial insects during periods of bloom when it is likely that pollinators will be present. And of particular importance is to consider warnings about the impact on pollinators of increasing concentrations or applying the labeled pesticide in combination with other formulations. Many bee kills across the country have been a result of labels failing to warn of toxicity to honey bees in this way. In fact, significant damage to honey bee colonies has occurred when they have been exposed to certain fungicides and/or insect growth regulators that have no bee hazard warning on their labels whatsoever.

While we appreciate EPA's efforts this year to improve pesticide labels and to address some of our concerns by adding restrictions and application directions, we suggest that further improvements are needed. Specifically, we remain concerned about a number of aspects of the current label, including the following: (1) the label only applies to foliar applications of clothianidin, dinotefuran, imidacloprid, thiamethoxam, tolfenpyrad, and cyantraniliprole, and has not been harmonized across all pollinator toxic pesticides, including non-foliar, as previously intended; (2) the directions for food crops and commercially grown ornamentals attractive to pollinators do not address extended residual toxicity pesticides, which can remain toxic for weeks after application; (3) the 55 degree Fahrenheit restriction fails to recognize that honey bees forage at temperatures as low as 45 degrees Fahrenheit; (4) the exception for applications made due to an imminent threat of significant crop loss is not sufficiently clear in that it doesn't reference who decides when treatments are needed, what the criteria for treatment is, how beekeepers will be notified or where to move bees; and (5) most importantly, the exception for an application made in accordance with an active state-administered apiary registration program raises serious concerns that state registry and notification plans will supplant federal labeling requirements even where such plans are insufficient or where beekeepers have no way to move their bees from harm. The last point is best discussed in context with BMPs. However, it must be re-emphasized here that we do not approve of any label that permits following a state BMP to stand as an exception to the requirements otherwise included on the EPA label for that pesticide. To interpret an exception in that way could be catastrophic for beekeepers and undermine both the state by state BMP efforts as well as the integrity of the label itself.

We are also concerned with the concept of differentiating between honey bee colonies which are currently pollinating a crop from those which are not. This portion of the new label language creates an illogical two tiered system of "pollinator protection" in which those colonies not pollinating a crop at the time of a proposed pesticide application are relegated to second class status. Most all commercial honey bee colonies in the United States are paid to pollinate crops at some point during the year. We strongly believe that all pollinators are worthy of protection from hazardous pesticides, not just those being paid to pollinate crops at the time of a particular application.

We continue to have concerns about inert ingredients and the potential risks they pose to honey bees. Inert ingredients in pesticides have not been rigorously tested for their safety in conjunction with the labeled pesticide, and all risk assessment should be based on final formulations. Increasingly, as research continues, "inert" ingredients are suspected as being part of the honey bee health problem. In fact, some advisors to the industry have suggested that inert ingredients not included on labels may be as harmful to honey bees as the labeled compound. Combined with adjuvants, which work to increase pesticide efficacy, these products can be additional stressors for pollinators.<sup>6</sup> EPA should make inert

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<sup>6</sup> Learning Impairment in Honey Bees Caused by Agricultural Spray Adjuvants: Timothy J, Ciarlo, Christopher A. Mullin, James L. Frazier, Daniel R. Schmehl, Dept. of Entomology, Penn State University – July 2012.

ingredient lists available to researchers to ensure that the science being produced is accurate.

EPA should also examine synergistic effects between pesticides that are used in combination and may together increase the toxicity of the mixed formulation to pollinators when compared with any of them when used alone.<sup>7</sup> It is our experience that many pesticide applicators are instructed to use several pesticide formulations together to save on the costs of application and to boost efficacy, but possibly at a great cost to beekeepers. For example, the recent poisoning of more than 80,000 honey bee colonies while pollinating in the almond crops was linked to a tank mix of fungicides and insect growth regulators that combined are far more toxic than either compound is when applied individually. Colonies that did survive had brood that was so severely damaged that they will need an entire season to recover and are no longer useful for pollination services or honey production. To address this, the EPA should develop risk management strategies for reducing the exposure of pollinators to harmful synergistic effects of multiple compound formulations.

We further recommend that EPA require studies from manufacturers on the role of metabolites of compounds that are approved for use. For example, metabolites of Imidicloprid, such as olefin and 5-hydroxyimidacloprid, have been shown to have toxic effects on honey bees comparable to those of the parent compound.<sup>8</sup> These metabolites are of particular concern because of the long term persistent exposure they cause for honey bees.

Finally, the EPA should consider working with appropriate stakeholders on alternative technologies to GMO Crops, which while allowing for multiple treatments of herbicide eliminate many of the native plant species that would otherwise grow in row crops and along the edges of fields. The result has been an environment that is less diverse for foraging honey bees. This new form of agriculture has greatly expanded the use of herbicides, and along with the additional products used to enhance efficacy, are providing more pesticide exposure in the environment. Resistant species are already requiring additional herbicides that are resulting in even further harm. This is not a sustainable practice.

*iii. The US EPA should, at a minimum, deny requests for increased tolerances for certain pesticides already suspected by an increasing body of evidence as causing harm to managed honey bees and other pollinators*

As we have already commented on the record, the beekeeping industry opposes the request submitted by Syngenta to amend thiamethoxam tolerances and add new tolerances (PP 3F8205) for grain, soybean, legume, and sunflower crops as published in docket #EPA-HQ-OPP-2013-0758, September 5, 2014. We have significant concerns over the recent request to raise residue tolerances on major cropping systems at a time when research continues to call into question the safety of such compounds for managed honey bees and other pollinators.

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<sup>7</sup> Pesticide Residues and Bees – A Risk Assessment: Francisco Sanchez-Bayo, Koichi Goka  
Faculty of Agriculture and Environment, The University of Sydney, Eveleigh, New South Wales, Australia, National  
Institute for Environmental Sciences, Tsukuba, Ibaraki, Japan.

<sup>8</sup> Lethal and Sublethal effects of Imidicloprid and Amitraz on Apis mellifera, Linnaeus (Hymenoptera: Apidae) Larvae and Pupae – Patricial Toth, University of Florida, 2009

We are particularly concerned about the magnitude of the requested increase. Increasing the existing tolerances in or on alfalfa forage from a level of 0.05 to 10 ppm (parts per million) is an increase of 200 times, and the increase of 0.12 to 8 ppm on alfalfa hay is an increase of 64 times the previously allowed levels. The new tolerance levels for “corn, field, forage from 0.10 to 4 ppm” is 40 times the previously allowed levels. We fear allowing such increases in levels of exposure of 40 to 200 times could seriously impair the health of honey bees given the mounting research on the toxicity of these compounds to honey bees and other non-target species.

The scale at which these changes would be deployed upon the landscape affecting so many honey bee attractive crops, as well as pollinator forage near agriculture, is contradictory to the USDA support of pollinator forage in CRP lands, as well as the Presidential Memorandum to support honey bee health. These proposed tolerance levels are based on harvested crops, and do not reflect what the honey bees are exposed to in foraged pollen, nectar, or water. Residues during the season of foraging will likely be much higher.

**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.**

After more than seven years of efforts to research the causes of honey bee and other pollinator health decline, we are encouraged to see a broad resurgence of interest in solving this problem, including necessary intervention by the highest levels of government. As such, we strongly support the President’s FY’15 budget proposal to substantially enhance coordination across USDA and other federal agencies, improve reporting and data collection on bee health through the National Agricultural Statistical Service (NASS), and increase federal resources dedicated to researching solutions. We look forward to a FY ’16 budget proposal that repeats those priorities and adds detail, particularly on the research innovation institute proposal, sufficient to result in substantial appropriated funds.

As reported annually by NASS, honey bee colony numbers have remained relatively stable over the past twenty years. Unfortunately, those numbers alone tell us very little about the health of managed honey bees. By definition, a colony is a queen with some number of bees, ranging from a few thousand to tens of thousands, which makes measurement of “colony” numbers alone inherently unreliable when attempting to assess health of the bees. The true measure of honey bee health is the productivity of the colonies, in terms of both honey production and pollination. While pollination quality is harder to assess given available data, U.S. honey production is tracked annually on a per colony basis by NASS. That report shows a steady decline in honey yield per colony over the most recent decades with current yields the lowest since record-keeping began in 1939. In addition to honey yield per colony, it is important to measure input cost per colony. To maintain current colony numbers, beekeepers have been forced to split colonies and rely on third party breeding operations. As a result, even where colony numbers remain constant, and even if honey yield has remained constant, which it has not, input costs have grown dramatically. The result is that many beekeepers have chosen to leave the business entirely and prices have continued to rise for both honey and pollination services consumers. We look forward to continuing our long standing relationship with NASS and recommend, consistent with the FY ’15 budget proposal, expanded data collection and reporting.

USDA, through its Agricultural Research Service (ARS) labs, should conduct research aimed at

providing more sustainable technologies for crop protection that ensure a safe and reliable food source with less dependence on the prophylactic application of systemic pesticides. In recent years, evidence has emerged that products applied to seeds may remain in the soil long after the crop season and potentially remain toxic for future crops. This may result in killing of non-target organisms long after the products were initially introduced to the soil. Given the significant potential consequences of this on pollinator, wildlife and human health, as well as soil and water quality, research should focus on testing and analysis of soils to determine if continued use of certain agrichemicals is safe, based on an accumulative presence of toxic compounds over long periods of time.

Further, ARS labs should focus research on pests and pathogens that remain major threats to honey bee health and cost the industry millions of dollars each year. For example, the beekeeping industry currently has only a couple of effective treatments for Varroa mite and resistance will develop to them in time. As a result, it is critical that new miticides, or else completely new strategies for mite control, be developed. We are uniquely aware of the difficulty this research poses as it is extremely challenging to kill mites while preserving the health of the non target honey bee.

Finally, we strongly encourage more field studies that track managed honey bee populations throughout the year as the bees are exposed to natural and other stressors. Recent efforts by ARS to do so have resulted in more specific understanding of bee die-offs and associated stressors than we have had in the past. To best accomplish this, ARS should diversify its geographical presence by establishing a stronger presence in areas such as the Dakotas and California where managed honey bees are most active during the honey production and pollination seasons. One way to accomplish this is to enter into cooperator arrangements with local research universities.

That said, while these field studies continue, it is vital that ARS re-evaluate the importance of the Baton Rouge honey bee lab for purposes of advancing it to the top of the agency's capital investment priority plans. That lab is where genome research is likely to find the longest term solution to ensuring a sufficient pollinator population in the United States. Without significant repairs and improvements, the lab will not be able to meet its lofty objectives.

As a general matter, federal research dollars funneled through competitive grants at the National Institutes of Food and Agriculture (NIFA) should be complimentary to the honey bee research agenda at ARS and not de-linked from its targeted and promising agendas. In other words, while NIFA research is peer-reviewed and awardees are chosen on merit, RFPs might better support the specific goals of ending bee health decline if research agendas and protocols were more coordinated across agencies.

With that end in mind, we look forward to supporting a proposal by Penn State University and a consortium of other universities to aid USDA in carrying out its research, and particularly its "pollinator innovation institute" objective. A concerted "all hands on deck" effort by government, industry and organizations working to protect all pollinator species will be needed to stem current bee health decline trends. The FY '15 budget proposal sought to harness just that level of effort and we hope the same will appear in the FY '16 budget. We strongly encourage using the budget process as a tool to meet the substantial goals that will no doubt be included in the "The National Pollinator Health Strategy" produced next year by this Task Force.

**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.**

Ethanol production has driven a rapid expansion of corn planting throughout much of the upper Midwest which is a warm season home to a majority of the commercial honey bees and where most of the nation's honey crop is produced. This expansion of row crop agriculture has reduced naturally diverse forage for honey bees and all native pollinators through the rapid replacement of CRP acres and new tillage of pastures and native prairie. USDA should work to provide new set aside acreage strategically planned for pollinators by providing appropriate incentives to off-set the economic effects of inflated commodity crop values due to renewable fuel standards (RFS) and subsidized Federal Crop Insurance.

Further, USDA should continue to expand the priority given to managed pollinator habitat in its existing conservation programs. As honey bees are a unique species with specific nutritional requirements, USDA should consult directly with the national beekeeper organizations and honey bee nutritional experts at USDA and USGS, in addition to consulting organizations representing a wider range of native invertebrates, whenever the Department seeks to improve pollinator habitat through programs, guidance or otherwise.

USDA should also continue to work with beekeeping organizations and the seed industry in selecting and producing appropriate, cost-effective seed mixes that can provide nutritious and abundant, season-long nectar sources to sustain honey bees. To date, we are encouraged by the efforts to develop a seed mix list as part of the Natural Resources Conservation Service (NRCS) technical and financial assistance program aimed at improving the health of honey bees. While we beekeepers have strong opinions on the large scale forage requirements for honey bees, we also understand that there are certain external constraints on implementing an ideal seed mix. Therefore, we applaud the work of the USGS in undertaking a substantial research endeavor aimed at identifying the best seed mixes for honey bees that will also be effective under the CRP and EQIP programs. However, more work can be done, including, of course, adding sweet clover and other honey bee friendly seeds to the seed mix recommendations even where states restrict such plantings. Educating those states on the need for the seed mixes is preferential to leaving them out, in our opinion. We also recommend that the Administration consult with "Pheasants Forever" on their recent efforts to maintain pollinator friendly habitat, and on their success in leveraging private dollars contributed for the cause.

Public lands offer a unique opportunity to expand pollinator habitat and offset growing agricultural acreage. By coordinating across at least USDA, the Department of Interior, the and the Department of Transportation, as well as with stakeholders with reach to state and local public land owner and manager counterparts, this Administration could significantly increase forage opportunities for both managed and native pollinators. Much like with existing USDA conservation programs, guidelines and policies would need to include instructions for land managers on seed mixes, pesticide use and access by beekeepers. With respect to public lands being returned to productive use or converted for new use, the Administration could develop guidelines to incorporate pollinator friendly forage into reclamation and redevelopment plans. Any such public lands program should include detailed recommendations to state and local land managers on the importance of pollinators and the necessary nature of a nation-wide collaboration to ensure sufficient forage for honey bees – forage that includes legumes such as sweet clover, which are too often wrongly classified by local decision makers as noxious weeds subject to weed control programs, particularly near U.S. and state highways where millions of acres of forage might otherwise be available. Education on preserving this type of forage

could have the dual benefit of improving pollinator habitat while saving money for governments engaged in “weed” control activities.

Privately held land or land with private rights of way that are currently not placed into agricultural or other productive use may prove good locations for honey bee and native pollinator forage. We were encouraged to see so many private sector interests represented at the recent meetings and we look forward to working directly with them and through the Administration to develop forage plans for their large land holdings. One model for consideration would be to include honey bee forage as part of Integrated Vegetation Management (IVM) practices to reduce the need for pesticides, promote healthy ecosystems, and provide measurable results, such as greater natural species diversity along rights-of-way. Edison Electric and the EPA recently signed an MOU along these lines, but more would need to be done to specifically acknowledge honey bees.

Finally, at the core of all forage and nutrition efforts is outreach and education. Without a strong understanding of the need for improved large scale forage, potential partners, whether federal, state, or private sector will not take the steps needed to make change. Or, if they do, they may be inclined to take smaller steps that while helpful to some pollinators, fall far short of the needs of large-scale commercial managed honey bees. We strongly encourage, and look forward to supporting, a robust grower, land-owner, and land-manager outreach program in 2015. With the right federal guidance and education materials in hand, we will be able to do our part.

**V. The Task Force should consider enhancing efforts to stabilize the commercial beekeeping industry while a national strategy is developed and implemented.**

The barriers to entry in the commercial beekeeping industry are similar to most sectors in agriculture, requiring large capital investments of and an enormous learning curve. As such, investing federal dollars now is a prudent way of ensuring an adequate supply of trained beekeepers in years to come while staving off the risks associated with further industry consolidation and erosion of honey market share.

The Emergency Livestock Assistance Program (ELAP), which began covering losses for beekeepers under the 2008 Farm Bill, and was extended in the most recent Farm Bill, could be improved. While very successful as the only effective government insurance program to cover losses related to honey bee health decline, claims are capped at an amount insufficient to provide stability for the nation’s larger commercial beekeepers who are facing losses exceeding 50% of their hives in a given year. One way to assure a more stabilizing effect would be to remove or increase the claims cap to better reflect the losses of the individual beekeeping operation. Another, would be to increase the overall program cap from \$20 million to the \$50 million envisioned in the 2008 Farm Bill. While this later recommendation would likely require an Act of Congress, we encourage the Task force to recommend this change. As it is, claims from 2012 -2014 have overwhelmed existing resources and resulted in reduced payments per claimant.

Additionally, USDA should consider developing new programs to help beekeepers replace dead hives. Average winter losses have exceeded 35% , a completely unsustainable rate when compared to prior historical averages closer to 15%, and further back even less than that. Whether through low cost loan programs or business grants directly to beekeepers, USDA could provide stability as beekeepers rebuild from losses that are bringing many commercial beekeepers close to insolvency. USDA should also assist agricultural colleges and universities to develop beekeeping programs that will foster a new generation of commercial beekeepers.

Finally, USDA and EPA should consider a program such as the one initiated in Minnesota to compensate beekeepers for losses where it can be established that the cause of the bee kill was pesticide poisoning, but either the applicator cannot be identified or the pesticide was applied in compliance with the label. While beekeepers would not want the existence of such a program to erode incentives for implementing robust BMPs and IPM practices, or to be viewed as liability relief for misapplications, in the instances described above, the program would ensure that the beekeeper is not always the one left without a chair when the music stops.

**VI. The Task Force should include the two national beekeeping organizations in any public-private partnerships formed to address large scale pollinator needs such as nutrition and forage, pesticide risk mitigation and longitudinal, field realistic research.**

As an industry, we remain committed to working in any way possible to ensure that this initiative is the beginning of securing a future for generations of beekeepers and specialty crop growers to come. As such, we will continue to stay engaged in Washington through our volunteer executive committees and paid consultants in any way necessary, just as we have done for the last seven years in working to raise the profile of this problem and seek solutions from Congress, the Administration, NGOs and the academic community. And we understand that to be effective, the Federal Government will need to enhance existing and develop new public-private partnerships, including partnerships with the two national beekeeping organizations, the American Honey Producers Association and the American Beekeeping Federation. Together our two organizations are able to effectively and efficiently reach the majority of the nation's large and small scale commercial beekeepers as well as the hobbyists and side liners who are a quickly growing segment of the beekeeping world.

Recently, we have been very pleased with the efforts of USDA to conduct pollinator summits dealing with the varroa mite and nutrition. We look forward to the reports produced from those summits as well as an additional summit on the impact of pesticides, hopefully early next year. The summits and the resulting reports provide a meaningful opportunity for specific and constructive engagement.

Additionally, we have begun discussions with the Farm Services Agency ("FSA") and the Natural Resources Conservation Services ("NRCS") at USDA about ways beekeepers can more formerly communicate with and provide support to those agencies as they implement conservation programs such as CRP and EQIP that aim to benefit commercial and native pollinators. We are grateful for the opportunity to formalize those relationships and we look forward to providing constructive support, including by: (1) using the outreach capacity of our two organizations to disseminate information from USDA to the nation's beekeepers and allied groups – from the smallest of hobbyists up to the largest commercial operations; (2) using the same capacity to gather information through surveys and other means to provide USDA with a stronger data set upon which federal policy decisions should be made; (3) using beekeeper-grower relationships developed over multiple decades to disseminate USDA education and technical materials to those growers with the objective on increasing honey bee and other pollinator habitat acreage across the country; (4) committing to cooperative research projects with USDA agencies, related university researchers and the private sector that require field monitoring of large scale beekeeping operations for the purpose of better informing program administrators and the policies they produce about the impact on managed honey bees of such factors as seed mixes, weather, migration patterns and anything else USDA might need to develop new data on; and (5) identifying industry supported candidates for federal advisory boards or committees working on pollinator health issues.

We believe that this course currently underway with USDA could be duplicated at the Task Force level, or at the very least with the relevant federal agencies. The more beekeeping organizations are involved in planning, development and implementation of the various federal efforts contemplated by the Task Force, the more likely they are to succeed the first time, thereby avoiding potentially costly and time consuming mistakes and/or confusion among stakeholders. We stand by prepared to assist each of the various agencies, the Task Force, Congress and the White House alike in developing a robust strategy and implementing it in a way in which it ensures the viability of commercially managed honey bees for decades to come, and we are hopeful that our above comments will be given due consideration.

As you well appreciate, the decline of honey bee health is a complex challenge that will require all hands on deck to resolve. The current losses and economic consequences are weighing on the shoulders of beekeepers and specialty crop growers – in most cases small family owned businesses. As more and more beekeepers quit the trade and the populations of pollinators decline, we edge ever closer to We further recommend that EPA require studies from manufacturers on the role of metabolites of compounds that are approved for use. For example, metabolites of Imidicloprid, such as olefin and 5-hydroxyimidacloprid, have been shown to have toxic effects on honey bees comparable to those of the parent compound.<sup>9</sup> These metabolites are of particular concern because of the long term persistent exposure they cause for honey bees. risking the security of our nation’s food supply. And as the honey bee is an indicator species, its plight should be of serious concern to all who may quite literally be observing the “canary in the coal mine”.

We again thank you for this opportunity to provide input into the Administration’s efforts and we look forward to a future where we can get back to the singular focus of ensuring that America’s table remains abundant with healthy fruits, vegetables, nuts, seeds and honey that are simply not possible without the managed honey bee.



Tim Tucker  
President  
American Beekeeping Federation



Randy Verhoek  
President  
American Honey Producers Association

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<sup>9</sup> Lethal and Sublethal effects of Imidacloprid and Amitraz on Apis mellifera, Linnaeus (Hymenoptera: Apidae) Larvae and Pupae – Patricial Toth, University of Florida, 2009