

Indiana Pollinator Protection Plan

(DRAFT 1-14-16)

Introduction

Pollinator health is a high priority national issue due to significant colony losses experienced by U.S. beekeepers over the past decade. In his June 2014 memo, “*Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators*”, President Obama called attention to the issue of pollinator health and directed federal efforts to reverse pollinator losses and help restore populations to healthy levels. The federal task force charged with developing a national strategy for promoting bee health and survival has set several goals, including: 1) reduce overwintering hive losses to less than 15%; 2) restore or enhance over seven million acres of pollinator supportive forage and habitat; and 3) minimize impacts from pesticide exposure. In particular, the President’s memo directed the U.S. Environmental Protection Agency (EPA) to engage state agencies in developing state pollinator protection plans as a means of mitigating the risk of pesticides to bees and other managed pollinators.

In Indiana the Office of Indiana State Chemist (OISC) is the state agency charged with regulating the use of pesticides. The Indiana Pesticide Review Board (IPRB) is the Governor appointed board charged with developing state pesticide policy and advising the OISC on matters of pesticide regulation. The IPRB and OISC are working collaboratively to facilitate the development of a state *Pollinator Protection Plan* to identify activities that can improve pollinator health. Key activities will include but will certainly not be limited to: 1) reduce pesticide exposure to bees and other pollinators through timely communication and coordination among key stakeholders; and 2) increase foraging, shelter, nesting, and brooding areas for bees and other pollinators.

Goal

The goal of this plan is not to serve as the sole definitive source of how pollinators should be supported or protected by every relative stakeholder group or agency in Indiana. Nor is the goal to eliminate or ban pesticide (insecticide, fungicide, herbicide, etc.) use in areas frequented by pollinators. Instead, the goal is to bring awareness to the issues faced by pollinators and all related stakeholders. The hope is that this plan can serve as a starting point to develop a blueprint of how each stakeholder group might contribute to the task of improving pollinator health.

Scope

It is estimated that one-third of our current food production requires pollinators. Managed pollinators and contracted pollination services on such Indiana grown agricultural crops such as apples, melons, blue berries, and cucumbers are some of the more obvious examples of this fact. The term “managed pollinators” includes any species of pollinators that are managed by humans. Pollinator management is usually conducted for purposes of pollination services or the production of honey, beeswax, and other related products. Managed pollinators are primarily honey bees (*Apis mellifera*), but could include other species of bees, such as alfalfa leafcutting bees (*Megachile rotundata*), orchard bees (*Osmia* spp.), mason bees (*Osmia* spp.) and some species of bumble bees (*Bombus* spp.).

Managed pollinators are the easiest to clearly associate with a stakeholder group, i.e. beekeepers. However, it is widely recognized that unmanaged native pollinators such as butterflies, flower flies, and hundreds of wild bee species are also important to agriculture, home gardens, orchards, and other successful plant development processes. It is also recognized that strategies that are protective of managed pollinators will also be protective of unmanaged native pollinators. Therefore, the scope of this plan will extend to all pollinators, not just managed pollinators, where feasible. In addition, the plan will attempt to incorporate agriculture and non-agricultural settings, commercial beekeepers and hobbyists.

Stakeholder participation for development of this plan

In consideration of the relatively broad scope of this plan, insuring participation by all potential stakeholders is challenging. However, one of the objectives is to facilitate participation as effectively as possible. To that end, an open face-to-face organizational and information gathering meeting was held on March 31, 2015, followed by open discussion and comment on drafts of the plan at three different quarterly meetings of the Indiana Pesticide Review Board (IPRB). Even though the scope of this plan has not been limited to just protection of pollinators from pesticide exposure, the IPRB was utilized as a vehicle for plan development based on their meeting schedule and open public process.

In addition, because enhancing pollinator habitat and forage has been identified as a crucial component to improving pollinator health, this plan is being coordinated with the Indiana State Department of Agriculture (ISDA). ISDA is taking the lead to coordinate and facilitate pollinator habitat and forage enhancement efforts.

***Activity Leaders:** Indiana Pesticide Review Board; Indiana State Department of Agriculture; Office of Indiana State Chemist;*

Make growers & applicators aware of pollinators near pesticide application sites

In order to help protect pollinators from potentially harmful exposure from pesticides, it is important that both growers and pesticide applicators have access to accurate and timely information on the location of nearby pollinators. This is important for the protection of both managed colonies and harborage areas of native pollinators, such as dedicated state nature preserves. Therefore, a critical element of this plan is the ability for a pesticide applicator to contact nearby beekeepers and property managers of pending pesticide applications.

The distance from the pesticide treatment site inside which the applicator should be cognizant of the location of pollinator concentrations (i.e. managed colonies, nature preserves, and designated forage areas) will henceforth be referenced as the “pollinator awareness zone”. For purposes of this plan, the pollinator awareness zone associated with agricultural, forestry, or area-wide invasive insect management pesticide application sites shall be considered an area within a two mile radius of the plotted and recorded pollinator site. For residential, turf, ornamental, and outdoor structural pesticide applications the zone shall be limited to properties immediately adjacent to the pollinator site. It should be noted that pesticide applications may be necessary to intentionally eliminate feral bees within or around structures if they pose a threat to human health or property. In addition, pesticides not identified on the product label as toxic to bees will most likely not be targeted for inclusion in this communication activity.

The proposed mechanism by which a pesticide user will be able to identify the location of pollinator concentrations within the pollinator awareness zone should be the voluntary web-based registry *BeeCheck*[™] <https://beecheck.org>. Beekeepers and other known pollinator property managers are encouraged to register and routinely update the locations of their hives on *BeeCheck*[™] during the pesticide application season. Growers and pesticide applicators are encouraged to register to get automated email messages alerting them to the presence of pollinators in their application area(s). In addition, it is recommended that dedicated state nature preserves be added to *BeeCheck*[™] as potential pesticide sensitive sites in order to raise awareness of pesticide applicators for pollinators living and foraging in these areas.

Two-way communication between pollinator managers and pesticide users prior to pesticide application is voluntary, as is participation in *BeeCheck*[™]. However, both activities are strongly recommended as they are critical to the success of this plan.

Activity Leaders: FieldWatch, Inc.; Indiana Nature Conservancy; Indiana Department of Natural Resources (IDNR); Beekeeper Associations; Grower and Applicator User Groups.

Encourage growers & pesticide applicators to contact pollinator managers

Once growers and applicators identify registered pollinator concentrations in the pollinator awareness zone, there needs to be a means for growers and applicators to contact those beekeepers to notify them of a pending pesticide application. Pollinator managers, in turn, need a reasonable time period to initiate pollinator protection practices, if necessary. Advance communication allows growers or applicators and pollinator managers to discuss and decide upon appropriate Best Management Practices (BMPs) to protect the pollinators in the defined area, while still allowing for management of the pest(s).

It is recommended that the grower or pesticide applicator make a reasonable attempt to contact all *BeeCheck*[™] registered site managers in the pollinator awareness zone a minimum of 24 hours prior to an anticipated pesticide application. However, it is important to recognize that there are often competing priorities and challenges to consider. For example, the presence of other nearby pesticide sensitive sites, changing weather conditions, and emerging development stages of plants and pests will introduce complicating variables into the pesticide application decision making process.

Activity Leaders: Office of Indiana State Chemist ; Purdue Pesticide Programs; Beekeeper Associations; Grower and Applicator User Groups.

Support regulatory measures to promote pollinator protection & health

There are a number of pesticide regulatory measures that are being proposed or are already in place to promote protection of pollinators. Recently (5-28-15) EPA proposed to revise pesticide product label language to address acute exposure to pesticides from foliar applications. EPA's current proposal includes pesticide label language as follows:

“It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

FOR FOLIAR APPLICATIONS OF THIS PRODUCT TO SITES WITH BEES ON-SITE FOR COMMERCIAL POLLINATION SERVICES: Foliar application of this product is prohibited from onset of flowering until flowering is complete when bees are on-site under contract, unless the application is made in association with a government-declared public health response. If site-specific pollinator protection/pre-bloom restrictions exist, then those restrictions must also be followed.”

Moreover, EPA recognizes there are concerns associated with potential exposure to some pesticides that are not classified as acutely toxic to pollinators by contact. These concerns include pesticides used in combination which may result in enhanced toxicity, and crops which incorporate pesticide residues in pollen/nectar. EPA has plans to address these situations by conducting chemical-specific risk assessments for bees and will consider additional product-specific mitigation, as needed, in the Office of Pesticide Program’s (OPP’s) registration and re-registration review programs. Specifically EPA has accelerated the schedule for re-evaluation of the neonicotinoid class of insecticides. These systemic insecticides are used in both non-agriculture and agriculture settings, including extensive use as seed treatments.

In addition to the proposed label language, there are currently a variety of existing legally enforceable label restrictions focused on keeping pesticides from drifting off-target and protection of pollinators. Some pesticide labels have restrictions prohibiting application when bees are foraging. Others may prohibit application when crops are blooming. Still other labels may restrict off-target drift to pollinators or their forage. Where adequate label drift restrictions do not exist, Indiana law provides a restriction against off-target drift that documentably causes harm. Each of these regulatory provisions is enforced in Indiana by OISC. OISC has developed specific investigation procedures for responding to alleged pollinator pesticide exposure incidents. OISC also maintains an active complaint response investigation and enforcement program that examines both direct exposure of pollinators to pesticides and indirect exposure from pesticide treated articles such as treated agricultural seeds.

Activity Leader: U.S. Environmental Protection Agency; Office of Indiana State Chemist

Promote Best Management Practices (BMPs) for pollinator protection & health

Regulatory safeguards aside, it is a primary objective of this plan to promote pollinator Best Management Practices (BMPs) that can be utilized by beekeepers, pesticide users, growers, land managers, government, homeowners and other stakeholders engaged in the protection of pollinators. While no one set of BMPs can be designated as the definitive source, this plan has identified BMPs developed by the Purdue University Cooperative Extension Service (CES) Issues Based Action Team (IBAT) as a logical source. The IBAT is an inter-departmental multi-discipline team focused on protecting Indiana pollinators. The various stakeholder organized IBAT BMPs are available at <http:XXXXXXXXXX> .

Activity Leader: Purdue CES IBAT

Educate & inform stakeholders & the public about the plan

This plan will be successful only if there is robust adoption of the measures herein. One way to accomplish this is through outreach to publicize the plan and its recommendations and requirements. Outreach efforts should target both key stakeholders and the general public and should include: 1) both initial and continuing certification training for licensed commercial pesticide applicators; 2) both initial

and continuing certification training for licensed private applicators (growers/farmers); 3) consumer brochures and fact sheets provided at point-of-sale pesticide distributors; 4) communication through beekeeper association meetings; 5) communication through neighborhood and homeowner association meetings; 6) public outreach through Master Gardner programs (CES) and Master Naturalist programs (IDNR); 7) educational displays at Indianapolis Zoo Butterfly Building and White River Gardens ; 8) publications by Indiana Native Plants and Wildflower Society(INPAWS); 9) publications by the Xerces Society ; 10) stakeholder targeted BMPs, publications and outreach through Purdue University Cooperative Extension Service (CES) Issues Based Action Team (IBAT) on Protecting Indiana Pollinators; and 11) and government agency web sites.

Activity Leaders: Purdue CES; Purdue Pesticide Programs; INPAWS; IDNR; OISC

Process for periodic review of this plan

This plan is meant to be a dynamic document that will be periodically reviewed and updated. The IPRB must determine whether or how to adjust the plan based on stakeholder feedback so that the plan ultimately leads to better relationships among the stakeholders and greater degrees of protection for pollinators. Therefore, in addition to providing opportunities for review and update at regularly scheduled quarterly IPRB meetings, this plan should be comprehensively evaluated at least every three years. As with the initial plan development, it is critical that this comprehensive review include a public stakeholder process to evaluate the effectiveness of the plan and to make modifications as needed.

Activity Leaders: IPRB; OISC

Measuring the effectiveness of this plan

Indiana has been working with EPA and other stakeholders to discuss appropriate measures for the effectiveness of state Pollinator Protection Plans. A document entitled **SFIREG Joint Working Committee Performance Measures for Managed Pollinator Protection Plans** has been created to assist with developing measures for this plan. The process for identifying suitable measures for Indiana is currently on-going.

Activity Leaders: IPRB; OISC; IDNR