



# West Virginia Pollinator Protection Plan

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## Preface:

President Obama released an Executive Memorandum titled “Creating a Federal Strategy To Promote the Health of Honey Bees and Other Pollinators” dated June 20, 2014. This document instructed multiple federal agencies/departments to create a unified strategy to promote the health of pollinators including and more specifically, honey bees. Furthermore, agencies were instructed to reverse pollinator losses and help restore their populations.

As a result of the Memorandum, the Pollinator Health Task Force (Task Force) was formed. The resulting strategy was released by the Task Force on May 19, 2015 as “National Strategy to Promote the Health of Honey Bees and Other Pollinators” (Strategy). Themes included in the Strategy were research, public outreach, improving pollinator habitat and developing partnerships across all of these activities.

The Environmental Protection Agency (EPA) is the lead federal agency dealing with pesticide regulation. The EPA’s task in this process is to reduce pesticide exposure to honey bees and native pollinators without losing the ability to control invasive or otherwise damaging pests in agriculture. The general intent of the EPA is to create a buffer between pesticide usage and the areas/times when pollinators are present using various methods. The West Virginia Pollinator Protection Plan is a result of management reviewing several plans already in use by other states. Future versions will take into account input from various stakeholders.

## Concerns:

- **Beekeepers:**

West Virginia Beekeepers are concerned by any stressor which adversely affects a honey bee colony. Colony Collapse Disorder, mites, beetles and diseases caused by bacterial, fungal and viral pathogens are common concerns. Issues with forage, management and pesticide exposure play an important role in colony health as well. A substantial percentage of colonies are lost to one or more of these factors each year.

Honey bees collect pollen and nectar from a variety of sources in order to maintain the hive. This exposes individual bees to chemical residues that may be present. Upon returning to the hive, the entire colony is exposed to the same residues. Beekeepers use varying chemicals to treat for varroa mites adding to the chemical residue in the hive. Obviously there are multiple pathways for honey bees to be exposed to chemicals and, keeping this in mind, any beekeeper is concerned with placing colonies as to minimize their exposure to pesticides.

Any successful beekeeper must address these stress factors by treatment and/or replacing lost colonies. This is a major financial burden and manifests itself through increased labor, decreased honey production, and the use of surplus colonies to replenish losses as opposed to the monetary benefit from the same hives.

- **Growers:**

Growers of agricultural crops battle many of the same factors as beekeepers including insect pests, diseases, fungi and mammals. Other problems include weeds, flooding, drought and

weather in general. Plant stress can become apparent through increased rotation duration, lesser quality/value, lesser yields, and in some cases total loss of a crop.

Use of pesticides is often necessary to control competing plant life. This is important since the competition must be controlled without adversely affecting the crop being protected. Use of insecticides and fungicides are less concerning regarding the crop but re-entry/harvest restrictions may apply when being used and considerations must be given to a pest's resistance to the pesticide.

Many crops require pollinators and contracted pollination is often necessary to ensure maximum yield. For these producers it is a concern to maintain a healthy population or have access to a healthy population of honey bees. These growers are faced with a dilemma of ensuring the health of pollinators while controlling the more damaging insect pests. This must be accomplished even though the pesticide used is detrimental to both insects.

- **Pesticide Users/Applicators:**

Pesticide users in West Virginia are both agricultural and non-agricultural. Time, temperature, wind, pest infestation levels, precipitation, and the presence of pollinators all affect decisions on pesticide selection and application. Buffer zones, surface water, endangered species, organic areas and other sensitive sites affect pesticide choice as well. Personal exposure, control versus cost comparisons along with the label restrictions can never be overlooked. The most appropriate time to apply for the target pest/pathogen may also be the most active time for pollinators in the area of application. This puts the pesticide user in a difficult situation when scheduling his applications.

## Goals of the WV Pollinator Protection Plan:

Agriculture in the US has become extremely efficient using a combination of technology, machines, pesticides and improved practices. Today, more is produced with fewer farmers than any time in history. State and federal agencies, being the regulatory part of this equation, recognize the importance of agriculture and also realize pollination/Apiculture as an important part of it. Additionally, the use of pesticides is a necessary tool for the control of damaging insect pests, troublesome weeds and some honey bee stressors.

- **Goals:**

1. Best Management Practices are being developed for pesticide users as voluntary plans for the major concerned parties. They are generalized tools meant for guidance and to benefit the overall health of pollinators. They will also ensure compliance with state apiary and state/federal pesticide requirements.
2. Communication is essential to the success of this plan. Meetings will be held with stakeholders and involve the major affected parties to address concerns. Upon completion, communication will be a more important tool to success in the field. Knowledge of apiary locations and pesticide application sites will be a major hurdle to meet the goals previously mentioned.
3. Reduce the unnecessary exposure of pollinators to chemicals. Ultimately, agriculture, apiculture and pesticide application are all interdependent. The

objective of this plan is to communicate a mutually beneficial pathway to all parties.

## Best Management Practices (BMPs):

- **Beekeepers:**

1. Communicate with land owner and consider your hive locations in relation to pesticide applications and other activities on the property. Temperature inversion, standing water and visibility to applicators should all be considered when placing hives. Obtain permission for placement yearly and keep in contact with updated information.
2. Be aware of property boundaries and neighboring landowners when locating colonies. Consider “rights of way” when placing hives to avoid interference with others using the same roads or property. Avoid negatively affecting any nearby landowner by considering bee behavior and nearby agricultural operations such as homes, feed, water and confined livestock or pets.
3. Work with pesticide applicators in a constructive fashion when notified of a scheduled treatment. Take necessary precautions to limit a colony’s exposure to scheduled applications by entrance blocking, netting or moving them to another location.
4. Notify all adjoining landowners when placing, removing or moving hives. This will remind them of current hive location and where to look for them. This is an opportunity to record contact information as well.
5. Report suspected pesticide kills of a honey bee colony to the West Virginia Department of Agriculture. The State Apiarist will be the primary contact for reporting and should be notified as soon as possible.
6. Use only registered pesticides and apply according to the label. Federal and state regulations must be followed using pesticides for treatment of honey bee pests. Questions regarding pesticide labels or usage can be directed to the WV Department of Agriculture, Pesticide Regulatory Programs at (304) 558-2209.
7. Register honey bee colonies with the WVDA, Plant Industries Division. WV state law provides that all honey bee colonies in the state must be registered with the WVDA. Registration is free and can be obtained by contacting Plant Industries Division at (304) 558-2212.
8. Ensure visibility of hives by obvious colors and locations. Posting a sign or placard with contact information is good practice.

- **Landowners/Growers:**

1. Work with beekeepers on hive placement. When all factors are considered the best placement for a hive will be a negotiated location considering the interests of the landowner and the beekeeper.
2. Communicate with all property users. Rental/Lease agreements should document who has the authority to allow or restrict beekeepers access onto property.
3. Communicate with pesticide applicators. Inform applicators of the presence of honey bee colonies on the property and their location. Clearly inform the

applicator of their responsibility to locate honey bee colonies and who is responsible for contacting the beekeeper before application.

4. Plant bee forage. Plant or maintain flowering plants, trees and shrubs to improve bee forage especially in non-farmable areas. This provides forage that will not be treated that may draw pollinators away from treated areas.
  - a) Buffer strips around waterways and other sensitive areas are prime areas to improve bee forage.
  - b) Cover crops can include flowering plants in the mix. A small amount of flowering plants can be beneficial to all pollinators.
5. Use alternatives to talc and graphite in seed planters. Recent studies show that honey bees can be exposed to pesticides indirectly. Talc/graphite used for mechanical planters as lubricant can carry pesticides from seed to off target plants where pollinators forage.

- **Pesticide Users:**

1. Always use Integrated Pest Management (IPM). Develop and monitor thresholds for acceptable levels of target plants/pests. When insecticides are required, try to choose products with lower toxicity to bees and a shorter residual toxicity.
2. Pay special attention when applying pesticides to flowering plants. Some pesticides have new label additions requiring the user to notify beekeepers of its use and prohibiting its use when flowering plants or pollinators are present.
3. Check the application area for the presence of bees before spraying and avoid the use of pesticides during bloom or when pollinators are present.
4. When possible make applications early in the morning or in the evening to minimize the exposure of bees to pesticides. Pollinators are most active when temperatures are above 55 degrees Fahrenheit.
5. Avoid pesticide drift. Drift carries pesticides off target to plants where pollinators may forage. This decreases the amount of product applied to the target and reduces the effectiveness on the target organism. Pollinators and other beneficial organisms can be unintentionally affected in a negative way.
6. It is important to identify local beekeepers prior to applying pesticides. Bees can forage for several miles. Pesticide applicators should locate and inform beekeepers within a one mile radius prior to scheduled applications. This allows beekeepers time to move or restrain colonies to reduce exposure.

## Improve Pollinator Habitat

- Anyone can plant or encourage forage for honey bees. Beneficial plants can be visually attractive and improve soil health as well. Certain trees, shrubs, flowers and less noticeable plants are excellent choices. Honey bees will benefit most by a diverse selection of flowering plants ensuring all required nutrients. Forage can be improved by:
  - **Municipal Improvements** should consider pollinator health for future plans along streets, sidewalks and parks. A variety of species is preferable for both pollinator health and can be very attractive in the landscape. Diversity is one way to combat invasive species as well.
  - **County and State Improvements** can improve habitat by incorporating beneficial plants in their seed mix for planting in disturbed areas such as road

side right of ways. Spot spraying problematic areas allowing the more beneficial plants to grow until later in the year provides more bee forage and reduces the exposure to pesticides.

- **Private Landowners** can place flower pots, create flowerbeds, plant trees or shrubs or establish gardens to provide forage for pollinators. Exercise caution when applying pesticides to decrease exposure to humans, bees and the environment in general. *Remember, always use pesticides in a manner consistent with the label. Failure to do so is against state and federal law.*
- Obviously, honey bees are not the only type of pollinator. Mammals, birds, native bees, butterflies and other insects all pollinate flowers. Some specialize and are attracted to different types of flowers such as Monarch Butterflies and milkweed. Monarch caterpillars feed exclusively on milkweed. Researching the type of pollinator you wish to attract/benefit is crucial to success.



