

## Best Management Practices to Protect Pollinators

What are pollinators and why should you care? Pollinators, such as bees, butterflies, bats and birds are essential to the many of the flowering plants in our environment and to the production of more than 130 different food crops. Pollinators can be sensitive to certain pesticides, especially insecticides. Your help as a landscape professional in applying pesticides correctly is a critical part of protecting pollinators.

There is much recent attention on honey bees, an important pollinator for many agricultural crops. In recent years, colony losses have been reported in some areas across the country. Science suggests multiple factors are responsible for colony losses including: parasites, diet and nutrition, lack of genetic diversity, habitat loss, beekeeping management practices, weather



and viruses. A 2015 Congressional Research Service report stated that the precise reasons for honey bee loss are unknown, and a 2013 joint USDA and U.S. Environmental Protection Agency (EPA) report found the varroa mite as the “most detrimental pest of honeybees.” However, pesticides and pesticide applicators are frequently blamed, thus proper use and stewardship of pesticides is of high importance.

The 2015 White House Pollinator Health Task Force Report emphasized increasing efforts to reduce risks to bees and butterflies. Generally, steps taken to protect them will also reduce

risks to other pollinators.

The following are suggested best management practices to protect pollinators.

### Be Alert to Blooming Plants– Scout the Property

The risk of pollinator exposure to pesticides is greatest when products are sprayed on pollinator-attractive plants while they are blooming. Before treating a landscape with pesticides, survey the property for the presence of flowering plants and weeds that are

attractive to pollinators. A good resource for pollinator attractive plants can be found at <http://www.xerces.org/pollinator-conservation/plant-lists/>.

Many common trees and shrubs such as conifers, ash and birch are wind pollinated and do not produce nectar that is attractive to pollinators. With proper application technique that minimizes drift, wind pollinated plants may be treated with pesticides with little risk to pollinators. When treating turf, removal of pollinator attractive weeds by mowing or other means prior to pesticide application can reduce pollinator exposure.

### **Read and Follow the Pesticide Label**

Before using any pesticide, always read the label and look for language regarding pollinators. EPA registered pesticides will have specific language in their directions for use; some have a specific Pollinator Protection Box that point out important safety information for using the pesticide around pollinators. Be aware that some products used to control pests do not require EPA registration, but may still be toxic to pollinators. This includes some organic products. Products not registered by EPA may not have adequate pollinator protection language.



### **Know How Your Pesticide Works**

Insecticides pose the greatest hazard to insect pollinators like bees and butterflies. Herbicides, Fungicides and Plant Growth Regulators typically have little or no toxicity to pollinators. As mentioned above, reading the pesticide label should provide insight on how dangerous a product is to pollinators. For pesticides that are hazardous to pollinators, limit exposure by applying before blooms develop or after petal fall. If products must be applied during bloom, do not apply directly to blooms to minimize pollinator exposure.

Systemic insecticides can move in plants and can have long periods of residual activity. Minimize pollinator exposure to these by applying at the labeled rate and application timing, and in accordance with any other label restrictions.

### **Use the Least Hazardous Formulation or Application Method**

Foliar sprays have the greatest potential to directly contact pollinators. Where practical, use granular formulations, soil drenches, trunk sprays or trunk injections to reduce the potential for

pollinator exposure. Applied according to the label, these application methods reduce contact exposure to pesticides.

### **Minimize Spray Drift**

Pollinators can visit the blooms of landscape plants or weeds near target plants, and be unintentionally impacted by drift and pesticide residues. Keep the product on the intended area and plant by applying pesticides with equipment that has been calibrated for the particular application. Use the appropriate nozzle and droplet size, application volume and pressure, and avoid application of foliar sprays under windy conditions.

### **Quick DOs and DON'Ts**

#### **DO**

- Do practice IPM and only use pesticides when needed
- Do read, understand and follow the product label
- Do understand the Pollinator Protection Box on pesticide labels
- Do select pesticides that have low hazard to pollinators
- Do apply pesticides correctly and pay attention to drift
- Do remove flowering weeds before making applications to turf

#### **DON'T**

- Do not apply pesticides unless needed
- Do not apply pollinator toxic pesticides to blooms of pollinator-attractive plants
- Do not apply pesticides to actively foraging pollinators
- Do not apply systemic insecticides outside of labeled rates and application timings
- Do not apply toxic pesticides to standing water

### **Other Resources**

<http://pesticidestewardship.org/pollinatorprotection/Pages/default.aspx>

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/plantsanimals/pollinate/>

<http://www.croplifeamerica.org/pesticide-issues/protecting-our-pollinators>

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