



Turf & Ornamental Best Management Practices for Pollinator Protection

Introduction

Protecting Pollinators is a top priority for landscape professionals because of the valuable role pollinators play in promoting a healthy ecosystem, not just in landscaping and agriculture, but to the environment at large. Landscape professionals have a special duty when using pesticides to ensure that they are used according to label directions and consistent with recommendations made by university Cooperative Extension Services.

Insecticides are a component in the implementation of integrated pest management (IPM) programs, therefore science-based practices are critical to achieving both effective control and minimizing the risk of off-target damage. Insecticides are vital tools for landscape professionals to provide healthy turfgrass and ornamental plants that the public demands but must always be used with the abundance of care and with an acute understanding of protecting pollinators.

The following best management practices (BMPs) are provided for landscape professionals to promote pollinator health when using pesticides in two key landscape application types; turf management and ornamental protection. In many instances some of the same practices and precautions are taken in both application types but these best management practices also specifically highlight the differences in the application use patterns and detail responsible practices that should be considered.

Core Best Management Practices

1. Utilize Integrated Pest Management Strategies
2. Promote Pollinator Habitat
3. Training, Education and Following All Label Requirements

It is the recommendation of NALP that landscape professionals completely read, understand and practice these recommendations and always remain in compliance with federal and state pesticide labels along with any other state managed pollinator protection plans and/or other federal, state or local laws.

Lastly, these BMPs are advisory in nature, not a national policy, and are written to encourage compliance and promote thoughtful pesticide applications to protect healthy green spaces while encouraging and taking appropriate measures to promote pollinator health. NALP is keenly aware that each environment and scenario may present specific circumstances that require alternate considerations and therefore these BMPs are not entirely prescriptive nor exhaustive of additional steps that may be taken. These BMPs should be used as guidance and to demonstrate the professionalism of the landscape industry and the commitment the landscape industry has towards protecting pollinator health.

Integrated Pest Management (IPM)

IPM is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM is a recommended approach of how landscape professionals responsibly use pesticides and other non-synthetic techniques to protect, preserve and promote healthy green spaces. Below we detail initial consideration for both turfgrass and ornamental uses and then we further provide recommendations for each application type individually.

IPM Considerations for both turfgrass and ornamentals:

- Positively identify the target insect. Different species of insects have different susceptibilities to different insecticides. Matching a pest to the most effective and least toxic insecticide should be the goal.
- Aim to control pests not eradicate them; eradication is impossible and leads to excessive and improper use of insecticides. Follow recommended damage thresholds for insect species.
- Set reasonable expectations with customers
 - Discuss acceptable damage thresholds and when to initiate control measures
- Use non-chemical techniques whenever possible
- When a pesticide is necessary, choose the least toxic/most effective product
- Only make applications when needed to control an insect population above the damage threshold.
- Apply products judiciously based on site history, observations, forecasts from relevant scientific/regulatory agencies or to protect plants susceptible to insect damage within their specific environment.

IPM – Turfgrass

- Plant turfgrasses known to have pest resistance such as endophyte-enhanced cultivars, which also display enhanced resistance against environmental stresses such as drought.
- Only make applications when needed to control an insect population above the damage threshold.
- Choose improved turfgrass varieties that will provide optimum performance while using less water, fertilizer and pesticide inputs as well as requiring reduced mowing.
- Mowing of weed flowers prior to treatment is an effective procedure to reduce insecticide exposure.
- Controlling weeds with herbicides prior to application of insecticides is an acceptable practice.
- Maintain highest practical mowing height which maximizes root mass, utilize core aeration for mechanical reduction in subsurface insect populations.

- Post-application irrigation per label directions increases efficacy and removes surface residues where pollinators can be exposed. Irrigation removes guttation fluid and dew that may contain residues is suggested.

IPM - Ornamentals:

- Choose plants that are appropriate for the USDA Plant Hardiness Zone the site and can be easily maintained and pruned to optimize plant health.
- Choose plants that have natural resistance to pest predation.
- When insecticide applications are needed, know the level of attractiveness to pollinators and if it creates a risk for pollinator exposure to insecticide injury – flowering plants vary in their attractiveness to pollinators and wind-pollinated plants are not attractive to pollinators.
- For pollinator attractive plants, do not treat with insecticides that have a risk of causing harm during bloom or when pollinators are actively foraging.

Habitat Promotion

- Provide abundant food for pollinators by creating and planting pollinator friendly areas in the landscape.
- Choose plants that are low input and provide nectar and pollen through the growing season
- Consider the addition of a bee garden to provide diverse habitat for different species of pollinators as well as multiple sources of nutrition throughout the growing season, especially in areas that are not suitable for turfgrass, such as xeriscapes, shady areas and waterlogged areas .

Train, Educate, Understand and Follow All Pesticide Label Directions

Simply stated, the pesticide label is the law. Commercial pesticide applicators must always be appropriately certified and trained to use pesticides when managing healthy green spaces. The following are some additional consideration when applying pesticides and considering pollinator health.

- Acknowledge pesticides that have an EPA “bee box” on the label and closely read and follow all guidelines with these specific heightened precautions.
- Understand off target pest and products used to control them is essential in the effective use of insecticides.
- Use insecticides correctly, according to label directions and Cooperative Extension recommendations to avoid potential lethal and sublethal effects on pollinators.
- Understand the critical role that landscape professionals play in proper stewardship of insecticide products and the importance of following label directions.

- Following label directions can allow for the use of pesticides with low risk and impact on pollinators

The landscape industry is committed to protecting and promoting pollinator health by properly educating and training landscape pest management application that rely on the principles of IPM and the guidance provided in this document. Please contact NALP for any questions.