

Mow before you spray, and other tips for protecting pollinators in grassy landscapes

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With the right combination of methods, landscape managers can strike an effective balance between pest management and protecting pollinators in turfgrass settings.

A new, open-access guide in the *Journal of Integrated Pest Management* (JIPM) offers an in-depth look at best practices for protecting [pollinators](#) such as bees and butterflies while reducing pests in lawns, fields, golf courses, and other managed grass settings. The review of existing research in [integrated pest management](#) (IPM) shows that some practices are simple but effective, such as mowing before applying an insecticide, which cuts flowering weeds so they don't attract pollinators once they've been sprayed.

"Simply mowing weedy turf before making an application of insecticides will greatly reduce the hazard to pollinating insects. If turfgrass professionals wish to take even more proactive steps, creating pollinator habitat strips or allowing white clover and other weeds to grow in turf will provide food for these important insects," says Jonathan Larson, Ph.D., entomology educator in the extension program at the University of Nebraska-Lincoln and lead author of the JIPM guide.

Concern about pollinator health centers on a variety of factors, including pathogens, parasites, habitat loss, and pesticide exposure.

Neonicotinoids, a class of insecticide that have been implicated as a contributing factor in pollinator losses, are a useful part of turfgrass IPM, which makes their careful use and the employment of alternative,

nonchemical [pest](#)-control strategies critical. Among these IPM practices are:

- Waiting until May or June to make pesticide applications, to avoid exposure to early-season pollinators and colonies of bees that are still recovering from winter stress in March and April.
- Using granular formulations of insecticides, which fall to the ground and avoid direct contamination of flowering portions of blooming plants.
- Selecting and planting grass breeds that are resistant to pests.
- Maintaining a high mowing height for grass to promote deeper root systems and enhance tolerance to stress and injury from pests.
- Introducing biological control agents, such as parasitic nematodes and fungi that attack pest insects but are generally safe for nontarget organisms.
- Establishing plots of pollinator-friendly plants (an already-growing practice among golf course managers and homeowners).

The guide to best practices in JIPM is the product of a workgroup formed during the 2016 National Turfgrass Entomology Workshop. "We chose this topic because many of the insecticides that people discuss as part of pollinator decline are used by turf professionals to care for turf and landscape plants," says Larson. "Our goal was to highlight what we knew about the interactions between pollinators and turf insecticides, determine what we still need to learn, and create extension materials to help get that information into stakeholder's hands."

Future research recommended by the group includes working to gain a deeper understanding of the breadth of pollinator species present in turfgrass habitats, what aspects of turfgrass ecosystems are most critical to pollinator health, and how pollinator interactions differ between cool-season and warm-season turfgrasses.

More information: Jonathan L. Larson et al, Optimizing Pest Management Practices to Conserve Pollinators in Turf Landscapes: Current Practices and Future Research Needs, *Journal of Integrated Pest Management* (2017). [DOI: 10.1093/jipm/pmx012](https://doi.org/10.1093/jipm/pmx012)

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