

## Pest Management Timing

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As we move through the growing season diseases, insects, and weeds will be encountered in gardens and landscapes. When it happens, it's easy to react and quickly use a control method especially pesticides.

It is important to use integrated pest management. IPM is using a combination of practices to manage a pest with chemical pesticides being a last resort. Key to success is knowing which practices work and when they are effective. With pesticides, it is often not when symptoms appear.

Effective IPM begins with positively identifying the cause of plant problems as well as underlying factors predisposing plants to pests. Different pests, mechanical injury, and environmental stress cause similar symptoms and one shouldn't jump to conclusions about what the cause is.

I'll use three common pests for examples. Crabgrass, bagworms and fungal leaf diseases like cedar apple rust on crabapples. Once we see these pests or symptoms they cause, it is often too late to use pesticides for effective management, and other management is best considered.

Crabgrass is a warm season annual. It is apple green in color and not seen in lawns until late May into summer. As an annual, it dies after it produces seed and new plants grow from seed each year. Dense lawns mowed at three and a half inches tall should compete with young crabgrass. The few plants growing along pavement or in thin areas can be hand-pulled before setting seed.

If a lawn has a lot of crabgrass, this is a sign it is not competing. Long term management should focus on increasing competition. Is the lawn thin or mowed too low or infrequent? Is core aeration or power raking needed? Is fall overseeding needed to improve density? Are correct watering practices used?

If herbicides are a control choice, preemergent herbicides applied just before soil temperatures reach 50 degrees F in May are most effective for achieving the longest period of control with one application.

High populations of bagworms kill evergreens and need to be controlled with hand picking or an insecticide. If an evergreen had bagworms last season, they will be easy to see now. Bags are one to two inches long, covered with dead needles, and attached to twigs.

Even though easy to see, now is not the time to apply an insecticide. It will have no effect as most are still in the egg stage inside female bags. Eggs hatch from mid-May into June. Young bagworms are one-eighth to one-fourth inch in size and difficult to see, but this is when insecticides are most effective.

Apply products in mid to late June. The majority of eggs will have hatched by this time and larvae are small enough to be controlled, especially with low risk pesticides like *Bacillus thuringiensis*, Spinosad, or Azadirachtin which is neem oil. Feeding by small bagworm will not cause much damage so waiting until the majority of eggs have hatched is safe and more effective.

Numerous fungal diseases cause spotting or blighted areas on leaves and some leaf drop. Most infect leaves during cool, rainy periods in spring and leaf symptoms begin a few weeks later. At that time, it is too late to apply a fungicide. Most products need to be on leaf surfaces prior to infection.

Fungal leaf diseases mainly cause aesthetic injury on otherwise healthy trees and control is often not needed. The best management is selecting disease resistance cultivars to plant. If a fungicide is used, they are most effective if applied in spring as leaves are developing, long before symptoms appear.

If a weed, disease or insect is encountered this year, after positive identification use IPM over only applying a pesticide. If a pesticide is justified and chosen as a control, learn when the right time is to use the product effectively to avoid unnecessary pesticide use, and learn what other practices can be used as effectively or for long term management.