

Attract Beneficial Insects with Companion Plants

Companion plants provide :

- Food (nectar and pollen)
- Shelter
- Nurseries (egg laying locations for offspring)

Scrophulariaceae Family



Turtlehead

Asteraceae Family



White Wood Aster

Lamiaceae Family



Agastache

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IPM

works for you!!



Cooperative Extension

COLLEGE OF AGRICULTURE &
NATURAL RESOURCES



University of Delaware
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Some images provided by:
<http://www.insectimages.org>

What's **wrong** with my plants?!?



If you see a problem, ask yourself these questions:

1. What type of *plant* is in trouble?
2. What *part* of the plant is affected?
3. What is the *best way* to handle the situation?

You are now on your way to using **I**ntegrated **P**est **M**anagement in your garden!

Why Integrated Pest Management?

IPM

What does **IPM** do for me?

IPM reduces pest problems in an environmentally friendly way.

How do I use **IPM**?

- ⇒ Diversify your plantings
- ⇒ Watch for early signs of pest damage
- ⇒ Tolerate light insect feeding

Where do I start with **IPM**?

Try **Cultural** methods first:

- Plant a diverse group of trees, shrubs, and perennials in suitable locations.
- Choose plants bred for resistance to insect pests and diseases.
- Hose plants off with strong stream of water to dislodge pests.

Allow **Beneficial** insects to do their job:

- Tolerate spiders, wasps, and ladybird beetles around the property
- Provide food and shelter for beneficial insects by planting a variety of plants (especially perennials)

If those don't work, **Chemical** control can be used as a last resort:

- Use less toxic pesticides like horticultural oil and insecticidal soap to preserve beneficial insects.
- **Remember**, when using pesticides follow all label directions carefully, **the label is the law**.

For additional pesticide control recommendations, contact Cooperative Extension agents in your county. (Phone numbers for county offices are provided on the back of this brochure.)

Common Landscape Pests

Many plants in our landscapes experience predictable, seasonal cycles of pest infestation. Knowing which *plant* is host to which *pest* is the first step in an IPM program. A short list of common plant hosts and insect pests follows.

The usual suspects

Conifers/Bagworm

One of the most common nuisance pests on conifers. Hand picking, *Bacillus thuringiensis*, and natural biological controls are effective when numbers are low.



Azalea/Azalea Lacebug

Azaleas are often plagued by this pest. Proper site placement, nutrition, and watering help to prevent an infestation. Fine grade horticultural oil can be used if damage gets out of hand.



Boxwood/Boxwood Leafminer

Boxwoods are often hosts to leafminers. Resistant English cultivars should be chosen to avoid problems. Horticultural oil is a safe option when control is necessary.



Euonymus/Euonymus Scale

Characteristic yellow splotches on Euonymus leaves may be scale infestation. If scale is present, look for the most susceptible stage in mid-May and again in July. Horticultural oil or insecticidal soap gives good control.



Maples/ Gall Mites

Frequently confused as a disease, the Maple gall mite constructs its home within leaf tissue. No control is necessary.



Oak/Oak Gall

Galls on oaks are common. They are usually created by tiny wasps and do not require management.



Rose/Rose Slug

The rose slug sawfly is a leaf feeder and can do extensive damage to rose leaves if not controlled early. For small plantings, hand picking or insecticidal soap are recommended.



Rose family/Japanese Beetle

For adult Japanese beetles, hand pick, and shake into a bucket of soapy water or plant resistant trees and shrubs.



The good guys

Ladybird beetles



Green lacewings



Parasitic wasps

