

● ALTERNATIVES

MANAGING APHID PROBLEMS WITHOUT PESTICIDES

BY CAROLINE COX

Have you found drops of honeydew on your car after you've parked it under a tree? Or have you found more than broccoli when you're cutting up a freshly-picked head from your garden? You're probably dealing with aphids, a common insect in yards and gardens. Don't reach for an insecticide, though; there are straightforward ways of dealing with these small creatures without having to use poisons.

Is Your Insect an Aphid?

There are many kinds of aphids. They're usually less than 1/8 inch long¹ and don't move rapidly.² They come in almost every color,¹ and mostly have soft, pear-shaped bodies. If you look closely at an aphid, you'll see two small tubes projecting from their hind end. These are called cornicles and are unique to aphids.² Aphids have needlelike mouthparts which they use



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to suck juices out of plants.³ They don't chew, so if you have chewing damage on a plant, it's not from aphids.¹

Aphid Biology

Understanding a few facts about aphids' lives will help you effectively manage them in your yard or garden. Aphids reproduce quickly when conditions are right.¹ During the spring and summer females give birth to live

offspring (not eggs) which are all female.¹ At the end of the summer males are produced, and mated females lay eggs that hatch the next spring.¹ When there are lots of aphids on a plant, winged individuals are produced which then search for a less crowded plant.² Many aphids excrete honeydew, a sugary liquid.³

Should You Control Aphids?

Most aphids cause what Oregon State University Extension calls "superficial damage."³ Unless aphid-infested plants are "failing,"³ or honeydew is causing a problem, control of aphids is not necessary. The black molds that grow on honeydew are harmless to plants.³ Some aphids transmit viral diseases in certain vegetables (squashes, beans, potatoes, lettuce²), but this is unusual in ornamental plants.¹

Preventing Aphid Problems: Planting Tips

It pays to think about aphid problems when you're putting new plants in your yard or garden. Some trees (birches, for example) are home to lots of aphids. Plant them away from driveways or decks where aphid honeydew will be a problem.³ Make sure that you don't bring aphids into your garden on transplants.² Also, check any weeds near your garden when you're setting out new plants and remove weeds with aphids.²

Trap crops work well in some situations. For example, black bean aphids like nasturtiums even more than they like beans. If you have trouble with aphids on your beans, you can plant nasturtiums near them, then pull them up when they're full of aphids.⁴

Preventing Aphid Problems: No Tasty Plants!

Here are a few simple steps to make



Caroline Cox is JPR's editor.



HOUSE PLANTS

Are there aphids on your house plants? Here are some helpful techniques:

- Keep new plants isolated until you know they don't have aphids.
- Wash your hands and tools when you finish working with or handling a plant and are ready to start with another.
- Inspect your plants regularly and isolate any that have aphid problems.
- Prune away heavily infested leaves or stems.
- Wash aphids off with a brisk water spray. Delicate plants can be dipped in water.

Univ. of Kentucky Entomology. 1994. Houseplant insect control. www.uky.edu/Agriculture/Entomology/entfacts/trees/ef406.htm.

sure that your plants are not “dessert” for aphids.

- Don't overfertilize. Too much fertilizer makes succulent new growth that attracts aphids. Organic fertilizers release nutrients slowly so your plants won't get too much.³
- Adequate water and light will help produce unstressed plants that can fend off aphids.³
- If aphids are thriving in the thick inner canopy of a tree, prune this part of the tree so it won't encourage aphids.²

Preventing Aphid Problems: Keep Them Away

If you are growing plants that are likely to have aphid problems, you can protect them by using reflective mulches or row covers.

Reflective mulches are silver-colored polyethylene sheets. Experiments at the University of California showed that these mulches repel aphids.⁵ Use them by spreading them on your garden bed, burying the edges with soil, and planting in holes cut in the mulch.² One manufacturer of reflective mulches is Adcock Manufacturing Corp. (www.adcockmfg.com).

Row covers are fabrics that are used to cover growing plants and protect them from insects like aphids.² They are made by several manufacturers and are available at gardening supply stores.

When You Need to Get Rid of Aphids

Encouraging insects that like to eat aphids is a great way to get rid of unwanted aphids.³ Many insects prey on aphids, including certain wasps, lady beetles (both larvae and adults), and larvae of lacewings and syrphid flies.² You can encourage them by not using insecticides³ and growing flowers that provide nectar and pollen like yarrow, parsley, cilantro, and sweet alyssum.⁴ You can also purchase them and put them in your yard, but lady beetles often decide to move on more quickly than you would like.²

Pruning is another good way to get rid of aphids. If the aphid problem occurs on just a few leaves or shoots, you can simply cut them off and



A hungry lacewing larva (above) and a lady beetle eating aphids (below).

dispose of them.²

A strong spray of water is another good way to remove aphids from sturdy plants. If you think that fungal diseases may be a problem, spray your plants early in the day so the plants can dry quickly in the sun.²

Insecticidal Soaps

NCAP does not recommend the use of pesticides. However, we realize you may find use of aphid pesticides necessary. If so, consider insecticidal soaps, recommended by Oregon State University, rather than conventional insecticides.³ Soaps kill aphids by dissolving parts of their bodies. The U.S. Environmental Protection Agency concluded that “the toxicity of these chemicals is generally low”⁶ while noting that they have caused genetic damage and birth defects in laboratory tests and are highly toxic to aquatic animals.⁶ One brand of insecticidal soap is Safer (www.victorpest.com).

Conclusion

The University of California reminds us “that moderate populations of many aphids attacking leaves of fruit trees or ornamental trees and shrubs do not cause long-term damage. Low

populations can be tolerated in most situations and aphids will often disappear when natural enemies or hot temperatures arrive.”² It's good advice!

The simple preventive steps outlined in this article, along with encouraging aphid predators and using a forceful spray of water as needed, should be sufficient to keep aphid problems manageable. ♣

References

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GOT ANTS?

Some ants care for aphids so they can feed on their honeydew. “At the same time,” according to the University of California, “they protect the aphids from natural enemies.” In order to successfully manage the aphids, you'll need to deal with these ants. You can put a band of sticky material around the trunk of a tree so that the ants can't get up the tree to take care of the aphids. One manufacturer of sticky barriers is the Tanglefoot Company. (www.tanglefoot.com.)

For more information about managing ants, visit NCAP's web site, www.pesticide.org.

Univ. of California. Div. of Agriculture and Natural Resources. 2000. Pest notes: Aphids. Publ. 7404. www.ipm.ucdavis.edu.