

Insects and Pesticides

by Jeff Wasielewski

Pesticides. Our home improvement stores have aisles upon aisles of products designed to demolish. From the floor to the rafters, liquids and powders are found in every concentration and variation. Each variety is designed to do the same thing, to wipe something from the face of the earth. When the lowly aphid is found on a new leaf, only one idea comes to mind, annihilate. Pesticides have labels that list their toxicity: Caution, Warning, and Danger. These are not words I want in my home.

There are over one million named species of insects but less than one percent of those do damage to plants. Nature was taking care of plants long before pesticides were invented. You can maintain a healthy, lush garden without ever spraying a drop of chemicals on your plants. You will have the “bad” bugs in your garden. If you grow it, they will come, but the damage they will do is minimum and will rarely threaten the life of your plant. The good news is that natural predators will also come. They will feed on the pests and they are far more effective than any spray or powder. They are part of the equilibrium that nature has in place to keep plants alive. It is often when we disturb nature’s system that the pest populations swell out of control.



A ladybug with aphids

When a group of aphids is spotted feeding on a plant, the first impulse is to spray them with pesticides. What was missed was the larval stage ladybug feeding on the aphids. The ladybug in the larval stage looks nothing like the adult ladybug and may be mistaken for just another bad insect. These young ladybugs are voracious feeders and a single insect can wipe out droves of aphids. Aphids reproduce at a fantastic rate with a single female aphid putting out 50 to 100 offspring in a matter of weeks. Each female is ready to reproduce within five days. In contrast, ladybugs lay about 12-15 eggs and take over a month



Ladybug larva

to repopulate. If you spray that plant that is full of aphids and the very hungry ladybug, the population that is going to rebound the quickest is the aphids, not the natural predator that would have done an amazing job of cleaning up your plant. Pesticides are never 100%, natural predators often are. By introducing pesticides into nature’s realm, you are disturbing nature’s delicate balance and actually doing more harm than good.

Pesticides can also create super pests. If you spray the same type of chemical over and over to treat a pest, the pest will develop a resistance to that chemical and will simply no longer be affected by it. Resistance begins when the first application of a pesticide is made. There are always a tiny percentage of pests that are not affected by the spray. These pests will breed and now a high percentage of their

offspring are also resistant because they share the same genetic makeup as their parents. Another spray is made which wipes out all the pests except the growing population of resistant ones. The cycle continues and soon the resistant pests are found in a very high number and the pesticide does nothing. Let nature deal with pests. It has been controlling pest populations since time began.

Letting nature take its course doesn't mean that you will always have pest free plants. There may be times when insect populations get very high before the predators can keep them in check. You must wait these times out and trust in nature's system. It is possible that pests may do extreme damage to a young or weak plant, but this has to be thought of as more desirable than exposing yourself, your family, and the environment to the dangers of pesticides.

There are times when natural predators cannot keep a pest in check because we have disrupted nature's system. This happens when a pest is accidentally transported (usually on plant material) to a new location far away from its natural predators. This has occurred in South Florida. About 10 years ago, a pest was introduced into Miami that devastated two types of cycads. The pest was known as Thai scale because it came from Thailand, and it proceeded to wipe out all king and queen sago cycads in South Florida. The pest had been removed from the predators that kept it in check and its population exploded. There is currently a whitefly from China that is attacking all species of the genus *Ficus*, including the omnipresent ficus hedge. The extent of the damage is yet to be seen, but horticulturists are taking the threat very seriously and different spray regimes have been created. I would not spray my trees over and over to keep them from danger, even if it meant the tree might die without my help. There are too many other trees that can take the place of the one I might lose, too many better choices than spraying pesticides.



The assassin bug hunting aphids.



Ladybug eggs

Pesticides are dangerous and extremely toxic. Their effects on man and the environment are not entirely known and the label often asks the applicator to wear protective suits, masks, and respirators. Homeowners seldom follow the label directions to their full extent and therefore expose themselves to countless dangers.

I implore you to leave the pesticides on the shelf where they will do you and your family no harm. Let nature do as it has done for millions of years. Let the delicate system of control that is in place take care of your plants. Don't feel bad if you have a few leaves with insects on them, they will survive in almost every case. Feel good knowing that your yard is pesticide free and safe for even the youngest visitors. Feel great to know that the environment is protected under your watch and our future seems that much brighter.