



Organic Grow: Pest Control

by Rick Weller, Founder of Organically Done Plant Products

As an organic grower, you are by definition working within a natural environment. Nature provides many benefits that we rely on to support healthy plant growth including natural pest controls. However, problems do occasionally occur, particularly for indoor growers where many of nature's controls may not be available. These pests can be a nuisance as well as very destructive to plant tissue and root structure. Integrated pest management (IPM) is an established approach to control using a combination of the following methods and products.

Environmental Controls – the most effective approach to keeping your plants pest-free is early planning and maintaining a healthy environment: do not introduce pests (buy quality potting mix and isolate for weeks before using, clean your shoes and tools), do not over water (or under water), keep your air moisture moderate, filter your fresh air, maintain adequate air circulation, provide proper soil drainage, feed your plants and soil, remove plant debris and dead leaves, remove unhealthy plants.

Mechanical Controls – mechanical controls are effective when implemented early in your grow cycle. Place sticky traps near the base of your plants, insert potato slices into soil, layer sand at the base of your pot (layering on top may be effective but it also makes it difficult to feed your plants), mix diatomaceous earth throughout your potting soil. Not only can these steps inhibit pests but they can also act as an early warning system of potential issues. If pests are discovered, removing them mechanically (hand picking or vacuum) can solve a problem depending on the type of pests.

Biological Controls – predators (such as nematodes, predatory mites, lady bugs, praying mantis) can be very effective before a pest outbreak occurs, preventing the establishment of unwanted pests. However, they will die off without an adequate food supply and they can be difficult to contain (you probably don't want lady bugs flying around your house). Pathogenic microorganisms such as *Bacillus thuringiensis* (Bt) are bacteria and fungi that disrupt the systems of pests. They are considered to have a narrow range of insects they impact and are relatively effective controls.



Organic Insecticides – these should be your last defense. Organic insecticides work by smothering, causing physical or neurological damage. Unfortunately, they can be toxic to beneficial organisms along with target pests. And remember, whatever you use for controlling pests may very well end up in the tissue of your plants, not something to be taken lightly when growing consumables.



Insecticidal soaps (from animal fats) for spider mites and Gnatrol (contains Bt) or AzaMax (contains neem oil) for fungus gnats are organic products that are relatively safe and may be considered for controlling these two common indoor pest problems. However, as with any insecticide, the effect on beneficials and human health are not entirely understood and caution should be taken if selecting these products for your environment.

Best Process

There are many variables in each growing environment and what works for one grower may not be effective for another. (otherwise this would be too easy) or may not work the way it did for you previously. Plan ahead, take pro-active steps to protect your investment and have supplies on hand.

Do some research ahead of time to learn about common pests and how to identify their presence. Plant damage can occur both above and below the soil and you normally cannot treat one while ignoring the other – pest controls that destroy adults are not always effective on eggs/larvae and vice versa.

Prevention is the best medicine but a quick response is equally important. Observe your plants and soil on a regular basis (every day if you can) and take steps to solve a problem as soon as it is discovered – once pests become established they can rapidly multiply making the problem much more difficult to correct.

Keep in mind that whatever we do in our plant environment may effect not only unwanted pests but beneficials also.



Organically Done (www.organicallydone.com) is a Michigan manufacturer of organic fertilizers and soil amendments. Our mission is to produce high-quality truly organic products that provide what your plants need while being free of potential contaminating sources that are found in many of today's "organic" alternative – NOT ALL ORGANICS ARE CREATED EQUAL.