Organic fungus control



Organic fungus control



Natural Pest Control

 Organic gardeners have realistic expectations when it comes to insects and diseases. They don't try to eliminate them from their yard or garden. Instead they seek to keep them below damaging levels. One of the main methods for keeping pest populations below damaging levels is to encourage thriving populations of beneficial insects and pest predators, including spiders, bats, birds, lizards, and toads. The two most important things you can do in your yard to support these helpful species is to plant a wide variety of plants and flowers and avoid using synthetic pesticides, which are especially damaging to beneficial insects. Practicing good sanitation is another method of organic pest control. Removing disease infected leaves or plants, rotating crops so you are not growing the same type in the same spot year after year, and handpicking insect pests and eggs all help to suppress pest populations.







Green lacewings known scientifically as the Chrysoperla rufilabris — are aggressive aphid predators that have an appetite for other softbodied pests as well.





- Four toothed Mason Wasp-
- The females hunt and paralyze caterpillars as the food source for their larvae.



Blue Wing Digger
 wasps can
 contribute
 significantly to
 natural control of
 lawn grub (primarily
 Japanese Beetles)
 populations.





 Thread waisted wasps As adults, they feed on nectar. The larva feeds on caterpillars, paralyzed and stocked in the cell by its mother. These are solitary wasps, so each female excavates her own burrow.



Celosia



Synthetic Pesticides





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Organic Pest Management: Example

- Conventional approach: spray insecticide to control caterpillars, which often results in a secondary outbreak of aphids or spider mites because beneficial insects such as lady beetles and other predators are also killed
- Organic approach: enhance habitat for beneficial insects to increase population, reduce stress on crop plant, use adapted varieties, and use non-chemical methods to control pests (Bt, hand-picking, row covers, alternating planting dates, traps, etc.)

Insecticidal Soap

- Generally considered to be the least toxic pesticides available.
- Used to control soft bodied pest such as aphids & mealybugs.
- Must have direct contact.





Insecticidal Soap

- Non toxic to beneficial insects such as parasitic wasps and ladybugs.
- No residual effect.
- Once the spray has dried, walking over the dried residue will not harm a moving insect.



Insecticidal Soap

- Some plants are sensitive to soaps.
- -Japanese maple.
- -Lantana
- -Bleeding heart.
- -Ferns
- -Palms
- If unsure about plant sensitivity, spray on a small test section.





Make your own Insecticidal soap

• Pure Soap: Use a pure soap, such as Castile, or all-natural soap. The active ingredient in insecticidal soap comes from the fatty acids in animal fat or vegetable oil, so it's important to use the real thing. Don't use detergents (which aren't actually soaps), dish soaps, or any products with degreasers, skin moisturizers, or synthetic chemicals.



Insecticidal soap

- 1 heavy tablespoon soap to 1 quart of water
- OR
- Cooking Oil: To help the solution stick a little longer, add two tablespoons of light cooking oil (such as corn, canola, olive, or safflower) per gallon of water to the mix. OR
- Vinegar: To make a spray that also targets powdery mildew, add a teaspoon of apple cider vinegar per gallon of water to the mix.

Insecticidal soap

• Bar Soap:, drop a bar of pure soap (such as organic castile bar soap or lvory) into a gallon of water and leave it overnight. Remove the bar and shake well before spraying.



Horticultural Oil-Dormant Oil

- Refined petroleum products.
- Used to control pests such as scale, mites, etc.
- Interferes with the pests respiration & membrane function.
- To be effective, it must come into direct contact with pest or eggs.





Horticultural oils

- Most available to home gardeners are petroleum-derived, but you can find plant-based oils, too. Manufacturers refine the oils to remove impurities damaging to plants, and then combine the oils with emulsifiers so the end product can be mixed with water and sprayed on plants.
- Look for types approved by the Organic Materials Review Institute (OMRI).

Horticultural Oil-Dormant Oil

- Do not use when temperature's are below 40° & above 100° Fahrenheit.
- Do not spray when humidity is above 90%, it may burn plants.
- May damage plants when buds are emerging.
- Consult label!!!



Make your own horticultural oil



Make your own horticultural oil

 Mix one tablespoon Canola Oil (regular veg. oil also), one teaspoon dish detergent, and one teaspoon rubbing alcohol in a spray bottle. Add a few drops of cinnamon oil. I then add warm water, shake and spray both sides of the leaves.

Organic Pest Insect Control Neem Oil

Neem oil comes from the tree Azadirachta indica, a South Asian and Indian plant common as an ornamental shade tree. It has many traditional uses outside of the insecticidal traits. For centuries, the seeds have been used in wax, oil and soap preparations. It is currently an ingredient in many organic cosmetic products too.



Neem oil

- As a pesticide, Neem oil kills insects at all stages of development — adult, larvae and egg. The active chemical in neem oil, azadirachtin, gets rid of insects in a few different ways:
- As an antifeedant
- As a hormone disruptor
- By smothering
- Azadirachtin will force the insect or pest to stop eating the leaves.



Neem oil

Neem oil insecticide works as a systemic in many plants when applied as a soil drench. This means it is absorbed by the plant and distributed throughout the tissue. Once the product is in the plant's vascular system, insects intake it during feeding. The compound causes insects to reduce or cease feeding, can prevent larvae from maturing, reduces and interrupts mating behavior.



Neem oil

• NEEM OIL IS A GREAT FUNGICIDE.

- You can use neem oil to prevent or even kill fungus on your plants. Use neem oil for powdery mildew and other common fungal diseases, including:
- Black spot
- Scab
- Rust
- Leaf spot
- Anthracnose
- Tip blight
- To prevent fungi, spray susceptible plants every seven to 14 days until the fungus is no longer a threat.



Insect control Pyrethrin

Pyrethrins are a class of organic compounds normally derived from Chrysanthemum that have potent insecticidal activity by targeting the nervous systems of insects. Pyrethrin can be synthetically made by industrial methods (pyrethoids), but it also naturally occurs in chrysanthemum flowers, thus is often considered an organic insecticide.

Controls insects and fungal diseases on listed fruits, vegetables & ornamentals Use up to day before harvest

Blight

Leaf Spo

ACTIVE INGREDIENTS:	0.000/
Sulfur	0.20%
Pyrethrins	0.01%
OTHER INGREDIENTS:	99.79%
TOTAL:	100.00%
EPA Est. No. 4-NY-1 EPA Reg. No. 6/	102-10-4

Keep Out Of Reach Of Children CAUTION (See Back Panel for Additional Precautionary Statements) Net Contents 32 FL. OZ. (946 ML.) 72551115

Pyrethrin Facts

- **Kills Beneficial Insects**: Pyrethrum is highly toxic to most insects. This means that it's effective against the pests, but it's also deadly to the beneficial insects that pollinate your vegetables and help out by eating those pests.
- **Best for Spot Spraying**: Like any powerful compound, pyrethrum should be used only for spot-spraying heavily infested plants. You shouldn't be dousing the entire garden with it.
- Human and Animal Safety: Pyrethrum is touted as being "non-toxic." Truth is, pyrethrum isn't harmless, but it is one of the least toxic pesticides out there. It's toxic to fish and amphibians, though, so it should be kept out of storm drains and waterways.
- **Pyrethrum Benefits**: Pyrethrins are biodegradable and break down quickly in sunlight (within a few days). They don't persist in the soil or on your veggies, which is one of the reasons they're considered relatively safe to use around food crops.
- **Growing Pyrethrum**: You can grow Pyrethrum daisies in your own garden to repel pests, and you can even harvest and dry the flowers to grind into your own insecticidal powder.

Sulfur & Pyrethrin

Sulfur Fungicide
 prevents fungal
 spores from
 germinating, so
 it is most
 effective before
 the disease
 develops.

Controls insects and fungal diseases on listed fruits, vegetables & ornamentals Use up to day before harvest

ACTIVE INGREDIENTS:	
Sulfur	0.20%
Durothring	0.01%
OTUED INCREDIENTS.	99.79%
UTHER INGREDIENTS.	100 00%
TOTAL:	702-15-4
EPA ESI. NO. 4-NT-T EFA Reg. NO. 07	IVE IV

Keep Out Of Reach Of Children CAUTION (See Back Panel for Additional Precautionary Statements)

- Bacillus thuringiensis, often abbreviated as Bt, is a naturally-occurring bacteria that makes pests sick when they eat it. There are two strains commonly used as natural pesticides.
- Bt is one of the safest natural pesticides you can use in terms of controlling caterpillar pests of vegetables or fruits without harming beneficial insects.



- Apply Bt Thoroughly: In order for Bt to work, the caterpillar has to eat it.
- Apply Bt Carefully: Be sure to limit your spraying to the affected plants, so that you only target the problem caterpillars.
- Give Bt Time to Work: Bt takes several days to work, so be patient.











Protecting yourself (Organically) from biting insects

Essential oils

 (eucalyptus,
 lemongrass,
 citronella, tea tree
 oil or rosemary)
 are the ingredients
 of many natural
 insect sprays.

