



A Guide to How Organic Active Ingredients Work !!

INSECTICIDES

Bacillus thuringiensis (BT) – BT attacks leaf and needle eating caterpillars through ingesting the bacterium. Feeding stops within hours, although death may not occur for a few days.

Citrus Oils – Citric oil from citrus peels destroys the waxy coating in the insect respiratory systems, and is one of the more effective organic controls. It can harm aquatic invertebrates, however so it should not be used near streams or ponds.

Diatomaceous Earth (DE) – An abrasive powder, cuts the exoskeleton of crawling insects. Also insects that ingest DE die within 48 hours. It may cause lung irritation in humans, so a mask is recommended for applicators.

Hot Pepper Wax – Hot Pepper Wax repels aphids cabbage looppers, beet armyworms, spider mites and whiteflies. It last up to 30 days and does not wash off easily. Avoid use on variegated African Violets, Basil, Parsley & Fruit Trees in Bud.

Insecticidal Soaps - Insecticidal Soaps are salts of fats and oils found in animals and plants. They work by dehydrating soft-bodied insects and require application every 7-10 days to infested areas.

Horticultural Oils & Sprays – They coat the insects airways, as well as their eggs, and suffocate them. These can damage plants in high temperature and low humidity conditions. Dormant Oil in Winter / Horticultural Spray / Summer Months.

Neem Oil – Neem is not a single substance but is a general term for both Azadirachtin and Neem Oil, which is derived from the Neem Tree. **Azadirachtin** affects insects in many different ways including acting as an insect growth regulator, anti-feedant, repellent, sterilant. It also works as a stomach poison .. in which insects must ingest during feeding in order to work. **Neem Oil** Extract works by suffocating insects and mites. Very effective against caterpillars, also aphids, leafminers, mealybugs, scale, thrips, and whiteflies.

Other Oils – Extracts from plant material, including garlic, clove, cedar, lavender, peppermint, and citronella should not be confused with horticultural oils. They work by both repelling and smothering insects.

Pyrethrins – Made of the ground up flower head of Chrysanthemum, It disrupts the nervous system of Insects. Most Pyrethrins are toxic to cold blooded animals.

Spinosad – Derived from a bacteria, it affects the nervous system and kills insects within a day or two of ingestion.

FUNGICIDES

Copper Sulfate – Apply copper when leaves can dry quickly. It is toxic to aquatic creatures, so do not use near streams and ponds.

Sulfur – Sulfur controls mites and prevents foliar diseases. Do not apply to plants treated with horticultural oil within the past 4 weeks. Sulfur corrodes metal, so a plastic applicator is best.