



Botanical Pesticides

Call them nature's avengers - these botanical pesticides that come from the plants themselves are some of the most potent pesticides.

Some of the world's most potent pesticides come from plants themselves, and these botanical pesticides have been in the gardener's arsenal for hundreds of years.

We've crushed the flowers of *Chrysanthemum cinerarifolium* to create the broad-spectrum pesticide known as pyrethrin, and people have turned to *Sabadilla* dust (derived from the seeds of a plant in the lily family) since the 16th century.

With a few exceptions, botanical pesticides fell out of favor when synthetic chemical controls hit the marketplace in the 1940s. With many gardeners now reaching for options with less environmental impact, newer botanical pesticides are flooding the marketplace.

Even though Mother Nature herself had a hand in creating these products, don't be fooled into thinking that all botanical pesticides can be used lightly.

Though most botanical formulas are considered safer than their synthetic counterparts, much care is needed when selecting and applying them.

Products like Rotenone (derived from plants of the *Derris* genus) have been linked to Parkinson's disease, and pyrethrin is a potent nerve poison. Another potential negative: some botanicals, especially when applied incorrectly, are as disruptive to beneficial insects and pollinators as they are to the bad guys.

That being said, there are some terrific, least-toxic botanical pesticides that are incredibly effective.

Botanicals are often more desirable than their chemical counterparts since they breakdown fairly rapidly; many are certified for use in organic production.

Turn to these products when safe, natural remedies are needed: Hot-pepper wax is a botanical product used primarily as an insect repellent. The blend of capsaicin and food-grade paraffin wax is a metabolic stimulant for many soft-bodied insects. Hot-pepper wax acts to repel pests for up to three weeks.

Neem (or neem oil) is extracted from the seeds of the tropical Neem tree. It works as both a pesticide and a fungicide when used properly. Neem not only repels insects, but it suppresses feeding and prevents them from molting. It's effective against a broad range of insects, but, if applied when bees are active, it may be harmful to them.

Garlic oil serves to repel insects and should be applied before pests have arrived for the best results.

Citrus oil products must come in direct contact with pests to be effective, but they can be used right up to the day of harvest. The oil coats and suffocates insects, and some brands are even labeled for use against fire ants.

Herbal essential oils are made from various plants, including clove, wintergreen, cinnamon, rosemary and peppermint. Some forms of these pesticides are used as a soil drench to control root pests like wireworms, while others serve as foliar pesticides applied directly to the plant itself.

When using any botanical pesticides in the garden, be sure to read and follow the label instructions carefully. Read about one organic pesticide company.