

## Your Pest Defenses

ORGANIC STRATEGIES AND PRODUCTS ARE MOST EFFECTIVE BECAUSE THEY ACTIVATE THE NATURAL FORCES THAT KEEP PESTS UNDER CONTROL.

### Rehab Habitat

**Know:** A researcher from University of California, Berkeley studied the aphid populations on eight broccoli farms over three seasons. She found that the plots surrounded by mixed landscape (rather than by another field) had the fewest pests at the end of the growing season.

**Do:** Leave as much uncultivated land around each of your plots as possible.

### Mix Varieties

**Know:** An entomologist at Penn State University compared the insect damage in test plots of soybeans and wheat planted with either one, three, or six cultivars. His analysis revealed that the more diverse the plot, the fewer the pests.

**Do:** Intermingle varieties in your rows to keep pests from decimating an entire crop.



### Grow Cover

**Know:** At Cornell University, a scientist measured the population of Colorado potato beetle larvae in potato fields. His results showed a 95 percent reduction of pests in plots where buckwheat strips were grown among the rows of potatoes.

**Do:** Plant buckwheat and other cover crops in strips between rows during the growing season as well as between seasons.

### Avoid Chemicals

**Know:** Another Cornell researcher found that chemical insecticides and fungicides harm beneficial insects and soil microbes along with pests.

**Do:** Use only pest controls approved for use by organic growers, such as pyrethrin, neem, and soap.

### Pick Pyrethrin

**Know:** A natural compound derived from chrysanthemum flowers, pyrethrin quickly penetrates the nerve system of an insect, reports USDA researchers at several universities. A few minutes after application, the insect cannot move or fly away.

**Do:** Target soft-bodied pests such as aphids, thrips, and mealybugs with Safer Brand EndALL™ Insect Killer, which contains a unique blend of pyrethrin, neem, and potassium salts of fatty acids (soap) that controls pests at all stages, from egg to adult.

### Spray Neem

**Know:** A USDA scientist studied the effects of neem, an extract of a type of evergreen tree, on the beet armyworm.

He reported that neem was effective at deterring the pests from laying eggs, reducing feeding by larvae, and killing the eggs before they hatch.

**Do:** Apply Safer Brand BioNEEM® to control a wide variety of pest caterpillars, including armyworms.

### Use Soap

**Know:** University of Connecticut Extension Service experts note that “fatty acids disrupt the structure and permeability of the insects’ cell membranes. The cell contents leak from the damaged cells, and the insect quickly dies.”

**Do:** Control spider mites, leafhoppers, and whiteflies with Safer Brand 3-in-1 Concentrate.

**QUICK TIP: MANY PESTS OVERWINTER IN DEBRIS FROM THE PRIOR SEASON’S CROP. CLEAN UP OR TILL UNDER CROP RESIDUES AFTER THE HARVEST TO REDUCE THE OPPORTUNITIES FOR PESTS TO MOVE RIGHT BACK INTO THE PLOT THE NEXT YEAR.**