

**GOOD GARDENING PRACTICES FOR PREVENTION AND CONTROL OF INSECT PESTS AND DISEASE**

1. Crop rotation helps prevent soil borne diseases. Do not plant the same or related crops in the same place season after season. Bear this in mind particularly with potatoes, tomatoes, corn and members of the cabbage family.
2. Weeds can harbor insects and disease as well as steal valuable nutrients and moisture from the soil. Keep your garden free of weeds. Mulching will take care of weed problems to some degree. Mulches can consist of straw, spoiled hay, leaves (oak, maple, ash and tulip tree leaves are best), black plastic, lawn clippings, manures, buckwheat, or rice hulls, cotton gin refuse, wood chips or shavings, ground corncobs, ground bark, pine needles, hops, sawdust, peanut hulls or newspapers.

It is best to put down mulch after a heavy rain. The layer can be from 2 to 6 inches deep depending on the coarseness of the material used. The coarser the material, the thicker the layer should be.

Some mulches deplete nitrogen from the soil. To unweathered sawdust, wood chips or shavings add ½ lb. Ammonium nitrate or ¾ lb. Ammonium sulfate or an organic source of nitrogen such as: blood meal, cottonseed meal, feathers, or manure. Add lime if an acid mulch like pine needles or oak leaves is used.

Mulching can also help prevent wilt by conserving moisture in the soil.

3. A healthy plant is a resistant plant. Use enough fertilizers and soil conditioners to promote vigorous growth, also try using hybrid varieties.
4. Water plants when necessary. This is best done early in the day (before 11 A.M.). Avoid over watering. Try to stay out of the garden when it is wet; leaves bruise more easily when they are wet and become susceptible to mildew and rot.
5. Do not touch healthy plants after being in contact with diseased ones. Dip pruning shears in alcohol after every use.
6. Inspect your garden daily for insects. Hand pick or knock them off the plant with a strong jet of water or organic insecticide before they multiply. You can drop the insects into a jar of kerosene or squash them.
7. Tobacco virus can be spread to other members of the tobacco family like eggplants and tomatoes by handling the plants after smoking.
8. Keep old sacks, baskets, rubbish and decaying vegetables and plants out of the garden as they can harbor insects and disease. Place decaying organic matter in the compost heap. Old wood can harbor termites and tent caterpillar egg masses. Leave the roots of plant remains exposed a few days to kill nematodes, then turn them under. Cultivation of your garden in the fall will kill several varieties of insect eggs that are laid just a few inches deep in the earth.

There are many methods for the control and eradication of insect pests and disease, but the best is a few ounces of preventative measures. Before launching an all-out attack on undesirable elements in your garden, be sure to ask yourself if the situation is really intolerable. A few bugs do not an infestation make. Identify your infestation. You can contact your local botanical garden, horticultural society or CENYC and ask for plant information service for help.

It is important to understand the differences between chewing and sucking insects and how they affect your plants. The two have different mouth parts, one which is adapted to chewing and eating leaves etc., and the other, which is similar to a hypodermic needle, sucks vital juices from the plant.

Do not be confused by the several methods of pest control explained on the next few pages (botanical, biological, organic sprays, trapping, manual, companion planting, and inorganic). The important thing is for you to find, perhaps by trial and error, the method that suits you and your particular problem and stick to it.

Botanical Insecticides are derived from plants. They are toxic to cold blooded animals, but their toxicity is relatively low to warm blooded animals. This type of insecticide breaks down readily in the soil and is not stored in body tissues. Do not use them near fishponds, streams, etc.

NAME	EFFECTIVE AGAINST
White Hellebore	Sawflies, slugs, onion maggots, cabbageworm.
Pyrethrum	Pickleworms, aphids, leafhoppers, spider mites, harlequin bugs, Cabbageworms.
Nicotine	Aphids, leafhoppers, white flies, trips, spider mites.
Quassia	Green flies, leafhoppers, slugs, mealy bugs, thrips.
Derris	Aphids, mosquito larvae, caterpillars.
Rotenone	Spittlebugs, aphids, spidermites, potato beetles, harlequin bugs, chinch bugs, carpenter ants, pea weevils, cabbage worms.
Ryania	Coddlng moths, European cornborers, potato aphids, onion thrips, Japanese beetles, asparagus beetles, squash bugs, cabbage worms, loopers, cornear worms, silk worms.
Sabadilla	Grasshoppers, coddlng moths, army worms, European cornborers, aphids, silkworms, cabbage loopers, squash bugs, blister beetles.