

Vegetables – Organic Gardening

If you desire to be a certified organic gardener, apply to a USDA-accredited certifying agent. The website of the national organic program contains information on organic certification. It maintains a list of allowed and prohibited substances. Visit the website for further information.

Read and follow the directions on the insecticide label. Use insecticides only on vegetables for which they are labeled.

Rotenone, which will kill beneficials, is highly toxic to fish and moderately toxic to mammals. It is slow-acting and has a residual of approximately one week. It kills beetles and sucking insects. Pyrethrum will kill lady beetles but has very low toxicity to mammals. Pyrethrum will kill pests rapidly or not at all. It has a very short residual and should be sprayed directly on the pest. Pyrethrum kills beetles, caterpillars, and sucking insects. Insecticidal soaps are not very toxic to beneficials.

Applications may be needed more frequently than once a week. Injury to plants may occur if they are used too frequently.

Insecticidal soaps kill soft-bodied pests, such as aphids, spider mites, and whiteflies. *Bacillus thuringiensis* (Bt) is nontoxic to beneficials and mammals but has a residual of a few days. Bt is effective against various caterpillars. Usually, caterpillars quit feeding within an hour of eating Bt. However, they remain on the plant and do not die for a few days. Even though the caterpillars remain on the plant and are not feeding, an additional application is not needed. Bt is most effective when caterpillars are young. Thus, frequent scouting is important. Sulfur may be used to control mites, but if temperatures are high, sulfur may injure plants.

Many of the principles of integrated pest management will be helpful in managing pests in organic gardens. These may include keeping plants healthy, rotating crops, interplanting, intercropping, planting at times to escape pests, planting resistant varieties, controlling pests when they are young, scouting the garden twice a week, correctly identifying the pest problem, controlling weeds, destroying plants after harvest, hand picking and crushing pests, using barriers to keep pests off of plants, spraying plants with water to knock pests off, traps and using beneficial organisms.