

# Cabbage Looper

**Y**ou walk out into your garden to go and pick some nice juicy kale and what do you see but a garden that looks like it is riddled with bullet holes. If you pick up the leaves and look on the underside you will find the infamous green guy called the cabbage looper. The cabbage looper likes to feed on many plants, it likes the plants from the brassica family the best. The cabbage loopers favorite foods include broccoli, brussel sprouts, cabbage, cauliflower, Chinese cabbage, collards, kale, mustard, radish, rutabaga, turnip, and watercress. Other vegetable crops that he likes to munch on include beet, cantaloupe, celery, cucumber, lima bean, lettuce, parsnip, pea, pepper, potato, snap bean, spinach, squash, sweet potato, tomato, and watermelon. Additional hosts are flower crops such as chrysanthemum, hollyhock, snapdragon, and sweet pea, and field crops such as cotton and tobacco. By his nature the cabbage looper does not prefer many agricultural weeds. The ones that do meet his picky standards are lambsquarters, *Chenopodium album*; wild lettuce, *Lactuca* spp.; dandelion, *Taraxacum officinale*; and curly dock, *Rumex crispus*. There can be five to seven life cycles of these bad boys.

**First Line of Defense** Healthy plants are the first line of defense. Many times the plants are stressed and are either drought stricken or over watered. One more thing to



## A Cabbage Looper Destroying Collards

consider is that many times plants are deficient in calcium, phosphorus and magnesium. So make sure that the plants are well fed and not weak from nutrient deficiencies.

**Keep Your Yard and Garden Free of Weeds and Debris Year Round** Insects will migrate to surrounding areas and breed there. You want to pay close attention to get rid of the weeds in your garden and in the areas near by. You do not want your garden to become re-infested with the pests that you just got rid of because the weeds in the surrounding areas were harboring the pests. We learned of the weeds that this months insect, the cabbage looper, did not like. If you are careful to pull the weeds

out by the root and destroy them you will be making a concerted effort at getting one step closer at being in control now and in following seasons to come.

**Good Air Circulation** Make sure that there is plenty of room for your plants to get proper air circulation. It helps when you have an infestation on your cole crops to pick off the old leaves on the kale and collards and compost them. The leaves will grow back.

**Planting For Beneficials** is a great plan always. The Effective beneficials that you want to hone in on are the wasp and tachinid parasitoids, as well as spined soldier bugs. A nuclear polyhedrosis virus (NPV) is a great attacker as well, however you have to purchase that

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under the name of Spod-X-LC from Certis. Plant mint, herb, fennel, dill, yarrow, clover and dandelions as a good source of food. You must remember to plant flowers that are small flat and open for the beneficial insects. They need a source of carbohydrates to eat and they also need water to drink, and shelter to get out of the elements.

**Floating Row Covers** are a great line of defense as they block the little green bundles of joy from coming in and having lunch. You can get them at any lawn center and online at every garden store. Floating row covers work well this time of year since we are talking about non pollinated crops. It is too cold to plant such crops that need pollination such as squash because of the weather. Another advantage of floating row covers is that they add a few degrees of protection on cold nights.

**Biorationals** remember even though these controls are natural they all have an effect on bees and beneficials so be careful and apply them early in the morning so they will not kill the honey bees.

**Azadirachtin** The two active ingredients are made from the oil found in neem tree seeds. This product disrupts the insect molting period antagonizing the insect hormone ecdysone.

**Diatomaceous Earth (Silicon Dioxide)** is made from a fossilized hard shell algae. It is ground into a fine powder and it absorbs lipids



**Cabbage Looper Larvae**

from the cuticle, the waxy outer layer of insects exoskeletons. This causes the insects to dehydrate and die due to the water pressure deficiency. Be careful not to breathe the dust when using DE, as it is not good to get it in your lungs. It is advised to wear a mask.

**Pyrethrum** comes from the seed cases of the perennial plant pyrethrum (*Chrysanthemum Cinerariaefolium*). Pyrethrum work by attacking the nervous system of insects and are neurotoxins. When used in amounts not fatal to insects, they still may have an insect repellent effect. Pyrethrins are very harmful to fish but are far less toxic to mammals and birds. They are biodegradable and break down easily when exposed to light or oxygen. They are the safest insecticides for use around food.

**Bacillus thuringiensis var. kurstaki and Bt. var. aizawai** are both soil bacterium that occur naturally. Bt is only effective on the larvae stage. Larvae ingest it and the spore of Bt paralyzes the cells in the gut. It is in essence a

stomach poison. The larvae has no more desire to eat the host plant. Bt continues to invade the insects other body tissues multiplying in the blood, eventually leading to death. It may take hours or a few weeks, all depending on how much Bt the larvae ate. It is used as a deterrent for whiteflies as well as many other insects. It has a lasting effect and needs to be reapplied after it rains. You need to apply every 5 days until under control.

*Beauveria bassiana* belongs to the entomopathogenic fungi. It is a fungus

that grows around the world and acts a parasite by causing disease in insects. It is used for control in whiteflies, termites beetles and is being tested for use in the control of malaria-transmitting mosquitoes.

Spinosad is made of spinosyns A and D, they are substances that are made by aerobic fermentation. The species that is being fermented is *Saccharopolyspora spinosa* of the actinomycete species. They were found in the Caribbean in soil samples in 1982. They are the filamentous bacteria that are in the soil that give it that sweet earthy smell. Spinosad works by ingestion, activating the nervous system of the insect, causing loss of muscle control. The insect dies of exhaustion because of the continuous activation of motor neurons. This usually happens within one to two days.