



CLIMATE-SMART URBAN AGRICULTURE

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WHAT ARE CATERPILLARS?

Caterpillars are a common greenhouse pest that can a great deal of damage if not controlled properly. Caterpillars are the larval stage of moths of butterflies and are most common during summer and fall. Female moths lay eggs after entering the greenhouse, leaving them in leafy greens and other susceptible crops. Caterpillars generally emerge in less than two weeks and immediately begin feeding on leaves and flowers.

IDENTIFICATION

There are many different caterpillars you may encounter in the greenhouse, the beet armyworm (*Spodoptera exigua*), cabbage looper (*Trichoplusia ni*), imported cabbageworm [*Artogeia (Pieris) rapae*], diamondback moth (*Plutella xylostella*), European corn borer (*Ostrinia nubilalis*), corn earworm (*Helicoverpa zea*), leafrollers (*Choristoneura* spp.) and cutworms (Cloyd, 2012). It is best to have them identified by an entomologist as many species may look similar.



CONTROL PRACTICES

In many cases maintaining a secure perimeter around the greenhouse and sealing all entry points is the best way to prevent moths from entering the greenhouse. Use insect netting on sidewalls and roof vents, and clear vegetation outside of the greenhouse perimeter is a great thing to implement as a part of your IPM (Integrated Pest Management) program. Netting can be purchased though most greenhouse retailers and is an excellent option as a preventative measure.

If caterpillars have already infiltrated the greenhouse there are biological and chemical controls. A common biological control is an egg parasitoid wasp, *Trichogramma* spp. These wasps lay eggs into the existing moth

eggs, eliminate them and hatch into wasps. It is important to note that they only infiltrate eggs and do not interact with the caterpillars themselves, so timing is important.

There are many chemical controls as a last resort such as *Bacillus thuringiensis* spp. *kurstaki*, (MOA 11A) (BTK) (Dipel DF, Deliver, Javelin, Thuricide N/G) to list a few (Pundt, 2020). *Bacillus Thuringiensis* is the most commonly used and can be ordered from just about anywhere. It must be ingested by the caterpillar before taking effect, eliminating caterpillars in three to four days. Other less common chemical controls include, Spinosad and Pyrethroids but may cause damage to other helpful greenhouse insects.



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These efforts are seen, appreciated, and of the utmost importance.



Natural Resources Conservation Service

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