K-STATE Kansas State University RESEARCH AND EXTENSION
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Problem: Colorado Potato beetle - *Leptinotarsa decemlineata*

Hosts: Potato, tomato, eggplant, pepper, tobacco and other solanceous plants.

Description: Colorado Potato beetle overwinters as an adult in the soil, in fencerows, or under litter in garden or fields. Adults become active in May and will start to lay eggs as soon as suitable host plants are found. Adult beetles are yellow with ten black longitudinal stripes on their rounded wing covers. They are about 3/8 inch long.

Clumps of 20 to 40 yellow-orange eggs are laid on the undersides of the leaves. Larvae hatch from the eggs in 4 to 15 days. The hump-backed larva has six legs and is about 1/8 to 1/2 inch long. It has reddish-tan to brick-red coloration with two rows of black spots on each side.

Larvae and adults feed on the foliage of the host plants and can cause extensive damage if populations are high. Feeding occurring within two weeks of peak flowering on potato will have a pronounced effect on yield.

Recommendations: Hand-picking is possible on small plantings but becomes impractical for larger gardens. Two strains of Bacillus thuringiensis (B.t. var. san diego and B.t. var. tenebrionis) are effective on this insect. B.t. var. san diego is sold under the name M-One and B.t. var. tenebrionis is marketed as Trident. These products are safe for mammals, birds, fish, and beneficial insects. However, it is important to apply B.t. when the larvae are small (less than 1/4 inch) to get good control. Normally, this requires applications every 5 to 7 days until all the eggs have hatched. Also, thorough coverage of the host plant is vital as the larvae must ingest some of the bacterium before it will have any effect.

Colorado potato beetle has become resistant to many of our chemical insecticides. If you wish to use them, alternate between different classes of insecticides for the first and second generation larvae.
The major classes are:

Pyrethrins: Most effective at cool temperatures.
Rotenone: May be sold alone or in a mixture with pyrethrins or methoxychlor
Spinosad: Examples are Fertilome Borer, Bagworm, Leafminer & Tent Caterpillar Spray
Bonide Colorado Potato Beetle Beater Concentrate
Carbamates: Example is carbaryl (Sevin). Sevin no longer effective for Colorado potato beetle in certain areas.

References:

1. Colorado Potato Beetle in the Home Garden, Ohio State University Extension Factsheet HYG-2204-93
2. Colorado Potato Beetle, Insect Diagnostic Laboratory, Cornell University

Last Update: 8/14/2012

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