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Asparagus Beetles in Home Gardens

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The common asparagus beetle, *Crioceris asparagi*, and the spotted asparagus beetle, *Crioceris duodecimpunctata*, are pests of asparagus. Distinguishing between the two species is important because the common asparagus beetle is more prevalent and causes more damage.

Identification

Both asparagus beetle adults are ¼-inch long with oval-shaped bodies and moderate length antennae. The common asparagus beetle adult is bluish-black with six cream colored spots on its back (Fig. 1), while adult spotted asparagus beetles are reddish-orange with twelve black spots (Fig. 2). Spotted asparagus beetles should not be confused with beneficial lady beetles. Lady beetle adults have broadly oval to nearly rounded, dome-shaped bodies with a varying number of spots. They also have heads that are partly to completely concealed when viewed from above, and short antennae.

The larvae of both species are slug-like with visible heads and legs. Common asparagus beetle larvae are light gray with a black head (Fig. 3), while spotted asparagus beetle larvae are orange.

Figure 1. Common asparagus beetle.

Figure 2. Spotted asparagus beetle.

Life Cycle

Common asparagus beetle adults overwinter in sheltered locations such as under loose tree bark or in the hollow stems of old asparagus plants. Adults appear in gardens just as the asparagus spears are emerging from the soil in spring. The beetles lay numerous dark brown, oval-shaped eggs on end in rows on the spears, ferns, or flower buds (Fig. 4). The eggs hatch within a week. The larvae migrate to the ferns to start feeding. They feed for about two weeks and then fall to the ground to pupate in the soil. About a week later, adults emerge to start another generation, feeding on the ferns for the remainder of the growing season.

The spotted asparagus beetle has a similar life cycle, but usually appears in gardens somewhat later than the common asparagus beetle, appearing in mid-May and disappearing in late July. They generally lay greenish eggs on the ferns. The orange larvae typically feed on the berries, or fruit, of the asparagus.

Damage

Feeding on the spears by both species of asparagus beetle adults can cause browning, scarring and may cause asparagus spears to bend over into a shepherd's crook (Fig. 5). When the ferns appear later in the growing season, the

Figure 3. Common asparagus beetle larvae.

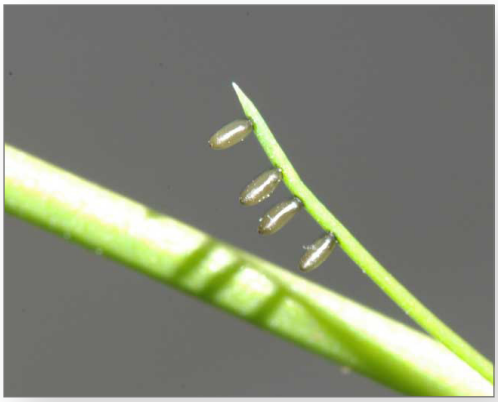

Figure 4. Common asparagus beetle eggs.

common asparagus beetle larvae and adults can also devour the ferns. Significant defoliation can weaken the plant and reduce the plant's ability to provide sufficient nutrients for the following season. Serious defoliation can also make asparagus more susceptible to invasion by *Fusarium*, a fungal pathogen. The feeding of spotted asparagus beetle larvae on berries does not affect the health of asparagus plants over the long run. Numerous eggs of the common asparagus beetle laid on the spears can make the asparagus unappealing.

Management

Start scouting plants in early May or just after asparagus plants emerge and continue throughout the remainder of the growing season. The best time to check for asparagus beetles is in the afternoon when they are most active.

Protect your plants if one out of 10 plants have either species of adult asparagus beetles (10% or more), or if 50% to 75% of the plants have common asparagus beetle larvae, or if you see two out of 10 spears (20% or more) with dark brown, oval-shaped eggs. Management isn't necessary for spotted asparagus beetle larvae since they feed on the berries and occur later in the season.

Physical

Handpicking, especially in small gardens, can be effective. Drop adults and larvae in a pail filled with soapy water. Also remove the dark brown eggs from the spears. New adult beetles can fly into the garden, so be sure to check your asparagus regularly. Handpicking is less practical in large gardens.

Cultural

Sanitation practices, such as elimination of plant residue in and around the asparagus will decrease the number of overwintering sites available to adults.

Biological

A tiny (less than 1/8-inch) metallic green wasp, *Tetrastichus asparagi*, parasitizes asparagus beetle eggs (Fig. 6). You may notice these wasps when working in your garden. They can sometimes provide very effective control, parasitizing up to 70% of the eggs. Lady beetle larvae and other predators may also be active, and will consume both eggs and larvae. Most insecticides, however, will also kill beneficial predators and parasites.

Insecticidal

If you detect a heavy infestation, you may want to use an insecticide. Below are examples of common names of active ingredients. You can find the common name for a pesticide by examining the label and looking under *Active Ingredients* (look closely as this is usually in small print).

Common name	Residual*	Notes
pyrethrins	short	contact
malation	short	contact
carbaryl	medium	contact
permethrin	medium-long	contact

** Short residual persists one or two days or less. Medium residual can persist as long as 10 – 14 days. Long residual can persist as long as four weeks. However, length of residual activity may be shortened by various weather conditions, such as rainfall.*

Carbaryl kills honey bees, therefore avoid spraying when asparagus or other plants are flowering. Although bees do not pollinate asparagus, they sometimes visit asparagus during bloom. If management is necessary during flowering, spray very early in the morning or in the evening when the bees are less likely to be gathering nectar or pollen in the garden.

Caution: Read all insecticide labels very carefully before buying and again before using to ensure proper application. It is especially important that the label specify recommended use on asparagus, or generally on vegetables. Also be sure to observe the number of days between pesticide application and when you can harvest the asparagus. The label is the final authority on how you may legally use any pesticide.

Figure 5. Sheperd's crook damage due to asparagus beetle feeding.

Figure 6. Parasitic wasp attacking asparagus beetle egg.

Modified with permission from the VegEdge fact sheet, Asparagus Beetles, by K. Van Wychen Bennet, E. C. Burkness, and W. D. Hutchison, Department of Entomology, University of Minnesota.

Photographs by Jeff Hahn.