University of California Cooperative Extension – Kern County

NEWS RELEASE

1031 S. Mt. Vernon Avenue • Bakersfield, CA 93307 • 661-868-6200 • http://cekern.ucdavis.edu

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John Karlik, Farm Advisor
Environmental Horticulture/Environmental Science
(661) 868-6220

Snails in the Garden and Landscape

One of the most common, if not the most attractive, animal found in spring landscapes in Kern County is the European brown garden snail. A nuisance pest, snails can rapidly multiply and devour herbaceous plantings, seedlings and vegetable starts. Snails can also infest citrus where they scar fruit. Management options include cultural practices antagonistic to the snail life cycle and other IPM methods including chemical control.

The European brown garden snail at maturity is about two inches in diameter, with a brown shell marked by faint yellow stripes. The snail was brought to California in the mid-1800's to be eaten as escargot. Individuals escaped (slowly) into surrounding landscapes and gradually spread. Snail population is highest in mild damp-weather areas, such as the central coast. Snails do not thrive in the desert, but may be found in irrigated landscapes in all but the harshest climates.

Snails lay eggs in a shallow nest in winter. When weather warms in spring, the eggs hatch, and the small snails work their way to the surface to begin feeding. Under favorable conditions they reach maturity in about four months. Damage is more severe under sprinkler-irrigated conditions rather than under drip irrigation. Wet foliage when early evening temperatures are 65° encourages extended feeding. Mulching, and other landscape practices which conserve surface moisture, also favor the snail. Under warm, dry daytime conditions, elusive snails cannot thrive, and will seek shelter under debris, venturing to forage at night. If drought conditions persist, snails will seal themselves in their shell for up to four years, becoming active when wet conditions return.

Ducks, geese, some toads, snakes and ground beetles are predators of snails. These creatures are not very common in most landscapes, however. A predator found frequently is the decollate snail, recognizable by its one-inch corkscrew or cone-shaped shell. Decollate snails don't feed on adult brown garden snails, but are effective against the immature stages. Although decollates also feed on small seedlings, their impact is minor compared to their larger cousins.

An IPM approach to reduce snail populations can involve several strategies. A good place to start is by cleaning up hiding places, removing boards, raised stones, and layered vegetable material. Hand-picking is one of the most effective control measures, but it must be done diligently and consistently to affect the population. Picking is more effective when combined with traps, such as boards, overturned flower pots, or other hiding places. In the morning, snails will congregate underneath, making them easy to collect. They may be disposed of in the trash or composted. Barriers, such as sand, diatomaceous earth, wood ashes, and other abrasive materials will temporarily block snail travel, but are much less effective if wet. An exception is copper. Copper bands are placed around commercial citrus trees in some locales and copper strips may also be used as low snail fences. The reason for the effectiveness of copper is not known with certainty. A chemical reaction may occur, generating a small electric current, and immobilizing the snail.

Baits have been tried with varying degrees of success. Snails are attracted to beer, although data related to effectiveness are limited. Data from a Colorado State University study indicated been was quite effective in trapping slugs; four thousand slugs in total were caught during the trial. Beers were tested, both fresh and flat, and fresh was most effective. Slugs had taste preferences for beer, but all brands were more effective than pink Chablis or tap water. Beer should be placed in a saucer at ground level.

Chemical baits are effective if properly used. Be sure to follow all label direction if using baits. Pelleted baits should be used only where exposure of pets and children is not possible. Bait containers can be used to restrict access to snails. The liquid form of baits is less attractive to pets but may not remain as effective as pelleted forms. Metaldehyde acts to dehydrate snails, so it is not effective during cool, wet weather. Methiocarb is effective under both wet and dry conditions. Iron phosphate has been effective in trials, and could be considered an organic control. It is best to irrigate an area before applying bait and then withhold water for several days following application.

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