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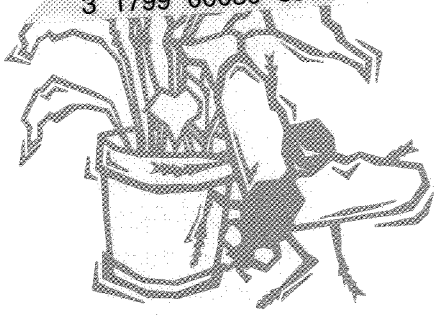
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I N S E C T S E R I E S



HOME & GARDEN



Clover and Other Mites of Turfgrass no. 5.505

by W.S. Cranshaw¹

Quick Facts...

Several species of spider mites can damage turfgrass in Colorado: clover mite, Banks grass mite and brown wheat mite.

Most damage occurs during early to midspring.

Damage to turfgrass is primarily related to dry conditions and turfgrass stressed by drought.

Clover mites can be a serious nuisance pest when they enter buildings in spring.

Many species of mites are common in Colorado turfgrass. Some, such as the oribatid or "hardshell" mites, are important in the breakdown of thatch and the recycling of nutrients. Other are important predators of pest insects and mites. Three spider mites species are among those that damage Colorado turf: clover mites, Banks grass mites and brown wheat mites.

Clover Mites

Clover mites (*Bryobia praetiosa*) are a common type of spider mite in Colorado. They breed outdoors on turfgrass, clover and other plants during spring and fall. During October and November, clover mites seek protected areas to overwinter and may move into homes in large numbers. This also occurs from late February through early May. They are a common indoor nuisance problem at either time.

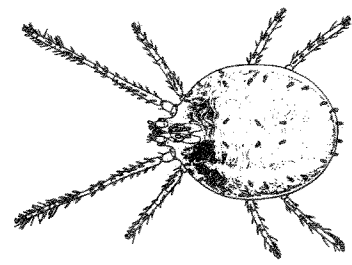


Figure 1: Clover mite.

Clover mites are smaller than the head of a pin and range in color from reddish or brown to dark green. Under close examination they have an unusually long pair of front legs, which distinguishes them from the common spider mites found on garden plants.

Clover mites are most often encountered as nuisance pests in homes. During warm days in fall and spring, large numbers of clover mites may become active and enter homes through cracks around windows and doors. South-facing walls usually are more heavily infested. The crawling mites may spread to walls, curtains, furniture and carpet. Typically, clover mites are described as "walking dust specks." Although they do not bite people, transmit diseases or feed on household furnishings, they can be a serious nuisance. When crushed, clover mites leave rusty red stains that are noticeable on white surfaces.

During early to midspring, clover mites also may damage turfgrass around building foundations and in other warm, dry areas of a lawn. Feeding damage appears as small, meandering silver streaks in the leaves. When mite populations are high, leaves may be extensively injured and die. Areas of grass extending several feet from the building foundation may be totally killed, appearing as light brown, irregular dead patches.

Clover mite injury to turf is commonly mistaken for winter kill and usually is found in the same sunny, dry areas of the lawn where winter drying problems occur. Furthermore, almost all injury occurs within 10 feet of a building, tree or some other upright surface. This is because clover mites periodically climb out of a lawn to shed their old skins and lay eggs.



Clover mites are considered cool-season mites, in contrast to many other spider mites that cause greatest damage during warm months.

Clover mites produce two or more outdoor generations during the cooler seasons, feeding on grasses and other plants. However, turfgrass injury occurs only early in the growing season, from February to May. As temperatures warm in late spring, clover mites produce dormant eggs that do not hatch until the return of freezing temperatures in fall. Because of this habit, clover mites are considered cool-season mites, in contrast to many other spider mites that cause greatest damage during warm months.

Control

Effective control of nuisance clover mites indoors means preventing mites from moving into the home in the fall or spring. Clover mite problems often are permanently prevented if all grass next to foundations is removed, leaving a strip of bare soil at least 3 feet wide. Cover the strip with pea gravel or plant annual or perennial flowers, such as zinnias, marigolds, chrysanthemums, roses or salvia, that are not attractive to clover mites.

Another method to reduce or prevent infestations inside the home is to spray a chemical barrier strip on the outside, 5 to 10 feet out from the base of the foundation and a few feet up on the walls. Often these treatments need be made only along the south and west sides of a building.

Clover mite infestations already present within a home are best managed by vacuuming. However clover mite migrations into living areas can also be prevented by putting a fine layer of various dusts around window cracks and other areas where clover mites may enter. Talc-containing baby powders, diatomaceous earth and even baking soda can create an effective barrier through which clover mites can not successfully pass. If left alone, clover mite problems will end in spring when they are dormant.

Always read and follow label directions for mixing and use.

Clover mite populations in lawns can be greatly reduced by providing some supplemental watering to areas where clover mites develop, such as warm and dry areas around sun-exposed foundations and near evergreens. Spot-spray treatments may be required on turfgrass in the spring to prevent injury to turfgrass. Products containing diazinon (Spectracide) or dicofol (Kelthane) are registered for this purpose. Apply insecticides when clover mites are detected by carefully examining the grass. Limit treatments to the sunny areas next to homes or woody plants where injury is concentrated.

Banks Grass Mite

Banks grass mite (*Oligonychus pratensis*) is a common mite species in Colorado. It is a serious pest of corn and also damages drought-stressed turf. It causes grass to turn a bleached straw color, often killing it rapidly.

Banks grass mite differs considerably in appearance from the other turf-damaging mites. It is smaller and lighter in color. During most of the season, it is green; the young stages are a paler color. During periods when the mites run out of food or environmental conditions are unfavorable, they may temporarily turn bright red. This mite lacks the elongated front pair of legs of the clover mite. It is related to the spruce spider mite (*Oligonychus ununguis*), a common pest of evergreens but with different feeding habits.

Banks grass mite is more destructive to turf than other turfgrass mites. In early stages of feeding injury, there is small, white flecking (stippling) similar to that of other mites. A slight purpling of the injured grass blade may be observed, which also is associated with brown wheat mite injury. Dead grass takes on a brownish-yellow color and the blades are stiff. Under favorable conditions, severe injury can progress rapidly. Almost all serious injury by Banks grass mite is related to drought stress.

If left alone, spring clover mite problems will end on their own by the end of May.

The Banks grass mite adapts more to warm weather than the other common turf damaging mites and is found throughout most of the growing season. Banks grass mites overwinter as adult females. During the cold months they are dormant, bright salmon, and rest at the base of the plants. When weather warms to allow activity, in late winter or early spring, the mites resume feeding and lay eggs. With favorable conditions, the life cycle can be completed in eight to 25 days. Continuous, overlapping generations are produced throughout the growing season. Under laboratory conditions, populations are capable of doubling in as little as 36 hours.

Banks grass mites spend much of the time feeding and resting at the base of the grass plant. This makes them somewhat difficult to detect and inhibits effective control.

Almost all serious injury by Banks grass mite is related to drought stress.

Control

Banks grass mite is the most difficult species of mite to control in turfgrass. For commercial applicators, bifenthrin (Talstar) is available and has provided superior control in Colorado State University trials. (Talstar has a 24c, Special Local Need, registration for use on turfgrass in Colorado.) Sulfur is also reported to provide control of Banks grass mite when it occurs in field crops.

Base all control programs on adequate water to the site. This includes fall and winter watering as needed, since populations of the mites can build up during this period. Under conditions of drought, control of the mite is often unsatisfactory.

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Brown-Wheat Mite

The brown wheat mite (*Petrobia latens*) occasionally damages turfgrass during spring, similar to the clover mite. Problems generally are associated with areas of drought stress and excessive winter drying. However, unlike the clover mite, populations are not so concentrated around buildings or trees. South-facing hills and highway medians are typical areas where turf damage by brown wheat mite can be expected.

Control

Adequate winter and spring watering are important in limiting infestations of brown wheat mite. If conditions promote turfgrass growth, the plants usually outgrow injury. Brown wheat mite appears to be fairly susceptible to insecticides. Diazinon should be an effective control.

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