



Prescription Treatment[®] brand Pest Management Bulletin

Volume 6



While beneficial, spiders frighten many homeowners.

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Web Spinning Spiders in Residential Accounts

This bulletin will cover the Prescription Treatment[®] approach to management of commonly encountered web spinning spiders in and around residential structures. Before we begin, however, we should cover some basics about spiders.

Spiders are common arthropods. There are very few places on earth where they cannot be found, and usually in large numbers. In a study done in England, it was estimated that in open grassy fields there were more than 2,265,000 spiders per acre.

Spiders are exclusively carnivorous and predacious. They all have poison glands and typically live off the body juices of a wide variety of animals including insects, other spiders, small frogs, birds and mammals. It is no wonder that spiders are the dominant predator in any terrestrial community.

Virtually all spiders are beneficial to the extent that through their predation of insects, they help maintain balance in nature.

Causes for Concern

There is no doubt that spiders are beneficial and play an important role in limiting the size of many insect populations. Unfortunately, many of your customers dislike spiders for three primary reasons:

- 1) People are afraid of spider bites. The truth is, however, it is difficult to get bitten by a spider. When an unexpected itch, bump or red spot occurs, first reaction is to blame a spider. While fear of spiders is understandable, it is typically out of proportion to the actual threat.
- 2) One of the more obvious and common reasons people dislike spiders is because of their web-making habits. Spiders use silk to create a harborage, to disperse and to capture prey. The webs that spiders spin to capture food are generally most offensive to humans. It should be remembered that spiders feed only on insects and will generally create webbing in areas where the likelihood of capturing insects is high. Spider webs can be found both indoors and outdoors. For most homeowners, a few outdoor spider webs are usually ignored, however, indoor webs behind furniture and in the corner of rooms are not tolerated. Cobwebs are generally a housekeeping challenge, and many homeowners don't realize they're nothing more than dust-covered, abandoned spider webs.
- 3) Spiders can be to some people... well... creepy. Most are relatively small, move quickly, hide in small cracks and crevices and often startle people. Arachnophobia, the irrational fear of spiders, is a common condition that needs understanding.

Given all of the above, it is no wonder that many homeowners list spiders as one of the top four or five pests they detest most and therefore require eradication.

Spider Biology

Life Cycle

The life cycle of a spider begins with the laying of eggs. When the female is ready to lay her eggs she spins or weaves a silken sheet and deposits the eggs. For most spiders the number of eggs laid by the female correlates with her size. Once the eggs are laid the female will weave more silk to envelop the eggs and eventually the eggs will become totally



Wolf Spider (Active Hunter)



Brown Recluse (Passive Hunter)



Funnel Web Weaver (Web Builder)



enclosed in a silken egg sack. Depending on the type of spider, the egg sack may be carried by the female until hatching. Other species may bury or hide it under bark, stones or other debris. After hatching, spiders undergo gradual metamorphosis, shedding their old exoskeleton and replacing it with a new one through a series of four to 12 molts. Spiders undergo little change in form. Young spiders look much like adults, just smaller. Most spiders live for roughly one year. Females tend to live longer than males.

Dispersion

The number of young spiders that emerge from an egg sack can be quite large. As a result, many of the young spiders must disperse into new environments. Many groups of spiders use a technique known as “ballooning” which is an aerial dispersal where the young spider will use a length of silk in place of a balloon. Typically, the young spider climbs to the top of an exposed structure, such as the tip of a leaf or the top of a blade of grass. It spins a long strand of silk and waits until the wind picks up the silk and the spider with it. In some parts of the country, this dispersal is an awesome sight. Entire buildings adjacent to waterways can become literally covered with young spiders and silk in a matter of days. This is often how entire structures, even tall ones, become infested quickly at all levels.

Anatomy

The body of a spider consists of two parts, the cephalothorax and the abdomen. The mouthparts are attached to the front of the cephalothorax. There are four pairs of legs attached along the sides of the cephalothorax. The abdomen is often large and colorful.

Grouping/Classification

From a pest management perspective, spiders can be classified by the way they capture prey. For example, some spiders (**passive hunters**), such as the much-feared brown recluse spider, ambush their prey. Many live in burrows, crevices in clutter or in silken tubes and lie in wait for prey. Other spiders (**active hunters**), such as wolf spiders and jumping spiders, actively hunt their prey. There are both nocturnal and daylight hunters. Nocturnal hunting spiders are rarely, if ever, seen during the day. However, the daylight hunters, such as wolf spiders, are extremely common and often seen by homeowners. A third group, the **web builders**, are spiders that depend entirely upon their web as a source of food. Different species from this group construct different types of webs, ranging from flat sheet webs to orb webs to three dimensional space and scaffold webs. These great engineering feats are met with both wonder and anguish by homeowners. Of the many web-building spiders, the house spiders are probably the most commonly observed by homeowners in and around their homes, although the less encountered black widows are the most feared.

Spider Management Scenario

You have been called into a residential account with spider problems. The symptoms include several places inside the home where spiders continually build webs. The spiders themselves are occasionally seen in the webs. Outdoors the problem is more severe. Large numbers of spider webs occur from the spring through the fall around the front door, back door and under the eaves in the backyard. The species is the common house spider. Following the steps of the **Prescription Treatment Pest Management** process will help you achieve a positive outcome in this challenging situation.

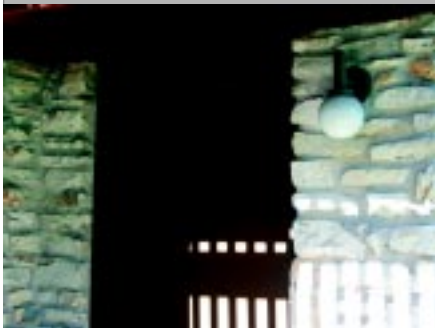


INSPECT

As always, the first step in Prescription Treatment Pest Management is inspection. In the case of a spider problem, identify the species then determine all areas where spider webs and spiders are observed. Knowing the identity of the pest and understanding its behavior will lead you to the likely infestation points. Next, identify the primary reasons for spiders building webs in these areas, and what can be done to reduce the attraction to these areas. Begin by taking a broad look at the surrounding environment:

- ▶ Is there a lot of wooded or undeveloped land? If so, there may be a large number of insects attracted to lights around the house in the evening.
- ▶ Is there open or running water nearby? For example, is the house situated on or close to a river, lake or small stream? There are many aquatic insects that are attracted to light in the adult stage. Spiders will often locate themselves around lights adjacent to bodies of water to take advantage of large seasonal insect populations.

On the outside of structures, inspect for web building sites around light fixtures, windows, doorways, vents, around/beneath decks and porches and along roof soffits. Also look for



PT P.I., PT 565 Plus XLO and PT Microcare are excellent choices when selecting a contact product for spider control.



PT Cy-Kick CS formulations offer long residual activity.

cluttered conditions and landscape overgrowth that may contribute to spider infestation.

On the inside inspect all rooms. Look for spider webs in corners, usually at the top of walls, around and inside window frames, and behind and under furniture next to walls. Don't forget to check the less disturbed areas where spider populations may be building unnoticed by the customer. These areas include eaves, vents and windows in attics, garages and basements, and gaps between construction elements in basements and crawlspaces.



PRESCRIBE

Once you identify the problem locations and the likely causes, formulate a pest management plan to solve the problem. Let's look at some of the methods available to you.

Light Management

It may be possible to affect spider populations by reducing the amount of prey found in the particular environment. One of the primary methods of reducing the number of prey around a structure is through the management of light. If the interior and exterior lighting is serving as an attractant for large numbers of insects, then doing something about the light may be part of the solution. Generally speaking, mercury vapor lighting is more attractive to flying insects than sodium vapor lighting. So-called yellow "bug lights" are less attractive than either of the other two. In some cases, using yellow bug lights around entryways can drastically affect the number of spider webs in those locations. The use of sodium vapor outside security lighting adjacent to the home will further reduce insect attraction. In some cases, a homeowner may simply have too much lighting on the exterior perimeter. While this is usually done to increase security, removal of some of the lighting may not diminish security and may drastically reduce the number of flying insects around the building.

Habitat Reduction

While most web-building spiders live in or adjacent to their web, many make use of small cracks and crevices as harborage. Sealing cracks and crevices on the exterior perimeter of buildings eliminates these harborages. Clutter in the form of construction materials and leaf and plant litter also provide habitat for spiders and their prey. The installation of weather stripping around doors and windows can be effective in keeping spiders out. Removal of lights on or next to houses can also make the habitat less suitable for spider occupation. And finally, simply removing the spider web with a broom should be part of all spider management programs. For future visits, this allows for easy recognition of where spiders have returned, as well as removing unsightly symptoms (adding value) for the customer.

Physical Removal

The use of vacuum cleaners to remove spiders has been successful in many accounts. Simply vacuuming the spider out of the web or out of its harborage and then removing the web may be all that is necessary.

Contact Insecticides

Generally, spiders are easy to kill with insecticides. The trick is to get the insecticide on the spider. Contact materials containing pyrethrin, such as Prescription Treatment brand P.I.[®], PT brand Microcare[®], and PT 565 Plus XLO[®], are labeled for and ideally suited for contact kill of spiders. If spiders are exposed, any of these materials can be applied directly to the spiders and their webbing. If spiders retreat into a crack or crevice, inject the appropriate product into these hiding places. The goal is to contact the spiders at the time of application. Removal of any traces of the spider's web should always follow the application of either residual or non-residual insecticides.

Residual Insecticides

In the case of heavy infestations or in areas where recurring infestations are likely, you need a residual insecticide such as PT Cy-Kick[®] CS, which is labeled for the control of spiders in and around homes and many other environments. It can be applied as a spot treatment or a crack and crevice treatment indoors for the management of spiders. To discourage reoccupation of harborage and webbing sites, such as the eaves of houses and around doors, PT Cy-Kick CS can be applied in either the pressurized formulation or the dilutable concentrate using a compressed air sprayer, back pack or power sprayer. Ballooning spiders spend a short time on the building surface before constructing a web and suspending themselves in the web. PT Cy-Kick CS formulation keeps the active ingredient at the surface where it is likely to be picked up by the spiders during their short window of exposure.



Show customers what you are doing for them and inform them of their role in spider control.



TREAT

Once you have communicated to your customer the non-chemical recommendations of spider management, you can begin the treatment part of the program.

Indoors

Inspect all rooms. Look for spider webs in corners usually at the top of walls, around window frames and behind and under furniture next to walls. If a spider is found, you can either remove it with a vacuum cleaner or use a directed contact application of PT Pl., PT 565 Plus XLO or PT Microcare. If the spider is not in the web, but in an adjacent crack, crevice or void, inject either one of these materials directly into the harborage to contact the spider. If the area appears to be chronically infested with spiders and webs, you may wish to use PT Cy-Kick CS in the cracks and crevices and, under some circumstances, the application of a spot treatment to the webbing site should be considered. Once the spider has been removed or killed, the web should be removed. This can be done with a broom or a vacuum cleaner.

Outdoors

There are two objectives that pertain to spider control on the exterior.

- 1) Reduce the food source (prey) of the spiders. A thorough perimeter treatment with application of PT Cy-Kick CS to the foundation, and adjacent planting beds and other common harborage and interception sites will reduce the number of crawling insects that would otherwise get caught in the webbing as a spider food source.
- 2) Attempt to control the sites where spiders are likely to reside. Direct contact with spiders and/or the residue left from a PT Cy-Kick CS application will help to reduce the spider population on the structure. As the treatment is made, pay careful attention to all areas where web building is likely, including low areas such as vents and basement windows, gaps beneath siding, main level window frames, porches, decks and doors, fireplace transitions, and high areas such as upper floor window frames, vents, shutters and overhanging eaves.

Finally, as with indoor areas, always remove spider webs from outdoor surfaces. This way you will know that if webs are seen on your next service call, the spiders have returned. Telescoping brooms or brushes are helpful in reaching high webs.



COMMUNICATE

Communication throughout the process of spider control can be a virtual tight rope for some customers. On the one hand, it's important to show the value of using a professional service to manage a spider infestation. On the other hand, you need to establish realistic expectations particularly when dealing with customers who have zero tolerance for these frightening pests.

Spiders can be an emotional issue for some customers, so it's important that you are sensitive to their fears or concerns. Some of these fears may be justified, particularly when faced with infestations of brown recluse or black widow spiders, while others may not. Either way, you need to be understanding and take the appropriate actions to educate your customer on his or her particular situation.

Soliciting your customer's cooperation in the issues of lighting, harborage reduction and in prey reduction is a vital aspect of spider control. Preparing a fact sheet for your customer that outlines what they should do to help the spider control process is a good idea. Showing the beneficial role spiders play in nature may also help to increase customer's tolerance for the occasional spider, without putting you out of the spider business.



FOLLOW-UP

If spider control is done properly, little follow-up is necessary until the next regularly scheduled service visit. If the indoor infestation was particularly severe, you may want to consider using sticky traps in discrete locations. Also, check and see if your customer has done his or her part in the management program. If not, you may need to re-emphasize the importance of environmental modification in spider management.