

Common Mistakes in Controlling Rodent Infestation

Introduction

It is not uncommon that problems of rodent infestation persist even rodent control measures have been taken. Rather than the methods themselves are ineffective, failure of rodent control is mainly resulted from poor execution of the measures. Below are some of the more common mistakes made by rodent control operators.

Strategic Problems

Lack of Planning

Many rodent control works were carried out without careful planning. The plan should be based on information such as rodent species concerned, extent of infestation, sources of food and harborage. A thorough survey has to be conducted to collect such information before any control action is taken.

Poor Record Keeping

Much information including the number of rodents captured and dead rodents collected, the locations where rodents were trapped or where baits were taken, and the approximate size of rodents captured/killed, is required for evaluating the effectiveness of the control measures and providing direction for adjusting the control actions being conducted. However, these pieces of information are not properly recorded in many cases. And in some even worse situations, proper record on bait/trap locations is also missing.

Technical Problems

Improper Location and Position of Baits and Traps

One of the crucial factors for successful baiting and trapping is where the baits or traps are set. If the baits or traps are not deployed near the food sources, the harborages of rodent or the route in-between, their effectiveness would be greatly reduced. Besides the locations, rodent baits are sometimes set a position which is difficult for rodents to consume. Badly deployed baits/traps may not only lead to failure in rodent control, but also give a false indication that rodent is absent at an infested area.

Use of Low Quality Rodent Traps

Rodent trap of good quality is essential for capturing rodents. Some rodent cages used are made of thin and soft wire, including the hook for securing bait. Rodents may not be able to trigger the door closing mechanism of this kind of trap when they

take the bait. Inappropriate kind of bait used is also commonly observed. Doors of rat cages may fail to close if the bait used is elastic in nature.

Improper Use of Rodenticides

Rodenticides are available in various formulations for different applications. It has been observed that people used rodenticides not for their original purposes. For example, rodenticide dust had been applied in areas where rodents are unlikely to pass or take shelter.

Premature Sealing of Rodent Burrows/Passage

Do not seal any known active rodent burrows or passages. Rodent may explore new routes if the old ones are blocked, making them more difficult to be detected. The rodents should be killed, and the burrows or passages should be properly tested and confirmed to be free from rodents before sealing.

Frequent Change of Control Method

Unlike handling insect pests problems, rodent infestation usually cannot be eradicated in a short period of time. It may take weeks to even months to eliminate an infestation, depending on the size of population and a number of other factors such as environmental hygiene. With the aid of a proper monitoring and evaluation scheme, sufficient time should be given for control measures to take effect. Frequent switching of control methods or changing the locations of baits/traps may reduce the overall effectiveness of the control program.

Use of Inappropriate Equipment

Some products are proven useless in terms of rodent control. An example is the ultrasonic based rodent repelling device. Do not rely on such device to deal with an infestation.

Other Problems

Availability of Food/Harborage

The rate of rodent reproduction is very high with sufficient resources, namely food and suitable harborage. These resources are usually plentiful at places with poor environmental hygiene. Besides promoting rodent reproduction, readily available food also compete with baits deployed and reducing the effectiveness of baiting and trapping. Maintaining good sanitation in an area together with appropriate rodent control measures are essential to successfully eliminate an infestation.

Rodenticide Resistance

If rodenticide applied is found consumed but not effective in killing the rodents, that rodent population may have developed resistance to that particular drug. Under the circumstances, rodenticides with different active ingredients or traps should be used to control the rodents.

Conclusion

Options for rodent control methods are limited, and sometime different methods have to be used together. In order to effectively control an infestation, the responsible operators should ensure the control program is properly planned and executed.



Fig.1 Poor environmental hygiene provides food and shelter for rodents

Can mattress encasement be used against bedbug infestation?

Bedbug mattress encasement is being used as one of the integrated pest management measures to help control and prevent the spread and harborage of bedbugs. It is a tightly fitted woven case that keeps bedbugs from infesting the mattress. However, it helps only if the right kind of encasement is selected and if it is properly installed.

How encasement works?

An effective mattress encasement completely seals the mattress, trapping any bedbug in the mattress inside. The encasement should be specially designed that it is both bite proof and escape proof for bedbugs, which means the bedbugs cannot feed through the material and cannot get in or out of the encasement once it has been installed. The bedbugs being trapped inside will then be unable to feed and starve to die. Other bedbugs available outside the mattress cannot penetrate the barrier of the encasement. They can only get on the surface of the encasement where they are easy to spot and remove as there are no deep seams or crevices where bedbugs can hide. An effective mattress encasement can provide protection to new mattress that has been purchased to replace the infested one. It even allows people to keep their infested mattress when discarding the infested one is not financially possible. Effective mattress encasement contributes in bedbug control that it shortens the time in inspection and treatment of mattress.

Quality factors of an encasement

There are many mattress encasements available in the market. However, not all of them work against bedbugs even some of them claimed to be “bedbug proof”. For an encasement to be effective, it must have the following characteristics:

- Fabric of the encasement must be bite proof that it prevents bedbugs from feeding through the material.
- Encasement must completely seal the mattress that no crevices, gaps or cracks available for the access of bedbug.
- Extra attention should be paid at the zipper area of the encasement. The zipper teeth must be small enough and tightly closed to avoid any gaps for nymph of bedbug to weave through. There must be no gap left at the zipper end stop for the bedbug to escape and the zipper end stop should be protected from accidental opening.

Installation and maintenance of encasement

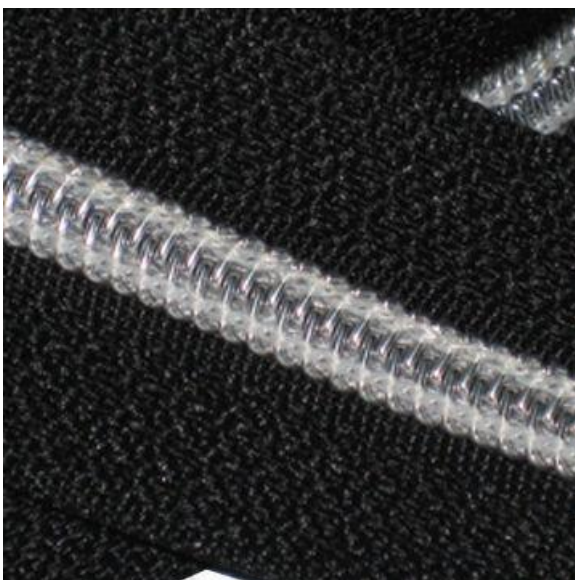
Before installation of the encasement, bedbugs and fecal matter left by bedbugs should be removed as far as possible from the mattress. The encasement may tear during the installation process or while moving or making the bed. Therefore, before installing the encasement, inspection should be made at the bed frame for any sharp edges, bolts

or other protrusion that could tear the encasement. These areas should be covered with paddings to protect the encasement. Although cheaper, vinyl mattress encasements are not considered as they can tear easily. A torn mattress encasement has no value in bedbug prevention and could provide an excellent harborage for new infestations. The mattress encasements are effective only if they are not torn, ripped or worn. Once the encasement is installed, it should not be removed. Fitted sheets and other bedding that can be laundered can be used to protect the encasement from dirt. The mattress encasement should be checked regularly to ensure there are no rips or worn areas for bugs to access.

There is no single solution for bedbug infestation. Using a bedbug mattress encasement can help minimizing the area for infestations and help detecting infestations. Using mattress encasement alone will not eradicate the bedbug infestation. Bedbugs can only be treated by employing the “Integrated Pest Management” approach with a combination of measures, including close monitoring, reducing clutter, using physical barriers and carefully applying pesticides if needed.



Mattress encasement



The zipper teeth must be small enough and tightly closed to avoid any gaps for nymph of bedbug to weave through.



Laudable mattress pads can be used to protect the encasement from dirt.