

Chapter 6

Rodent Prevention and Control Strategies for Maintaining a Rodent - free Area

Rodent prevention and control strategies comply of a series of steps. This chapter briefs the different aspects of a comprehensive rodent prevention and control programme for maintaining an area rodent-free. The rodent population of an area could be substantially reduced and maintained at low level of rodent activity with active participation of the community. The flowchart in Annex I summarizes the strategies for maintaining an area rodent-free.

Integrated Pest Management

The objectives of establishing and maintaining an rodent-free area can be achieved by adopting the Integrated Pest Management approach. The approach is a process starts with identification of the rodent problem by inspection and confirming the species of pest causing the problem. It follows with recommendations on making the place not suitable for the pest's activities, the selection of methods of treatment for solving the rodent problem and continuous evaluation of the effectiveness of the treatment.

Inspection

A well planned programme is the key to the success of a rodent control operation. The first step is to conduct rodent inspection. The aims of such inspection are:

- To find out the rodent species that causes the infestation and the activity range as well as the approximate number of the rodents;
- To locate the harbouraging places for rodents;
- To locate the food sources for rodents; and
- To plan strategic rodent operation and long term control.



Thorough inspection for rodent signs at the premises and the surrounding areas is necessary for the planning of rodent control operation. One should be equipped with a torch and other protective equipments (such as gloves, mask, etc.) for carrying out the rodent inspection. Proper record of findings during the inspection should be kept.

Several rodent signs indicate the active rodent activities. Since rodents usually active at night, clues needed to be found out to trace the activities of rodents. These rodent signs include:

Rodent sighting

Sighting of both live and dead rodents confirms rodent activity in the premises.



Fig.6.1 Dead rodent

Rodent dropping



Fig.6.2 (Left) Droppings of house mouse



Fig.6.3 (Middle) Droppings of roof rat



Fig.6.4 (Right) Droppings of sewer rat

Droppings of rodent were found usually at the harbouraging place. The amount, location and freshness of droppings can give ideas on the rodent population and indicates their activity range. The presence of fresh droppings indicates there are rodent activities in the area currently. Droppings can also help to identify the species of rodent that cause the infestation.



Rat-hole

Rat-holes on the ground are usually occupied by the ground species of commensal rodent-the sewer rat. However, roof rat may also occupy vacant burrows on the ground. Active burrows have a smooth and intact opening where droppings, smears, food debris or loose soil may be found nearby. A single burrow usually has two to three openings.



Fig. 6.5 Rat holes found in flowerbed

Rodent smear

Grease is secreted by the rodent on its body. Smears, dirt marks of grease with dirt, will be left by rodents on objects upon their rubbing against an object after an extended period of time. Smears indicate heavy or long existing rodent infestation and also reveal runways used by rodents. Fresh smear, shiny smear, indicates rodent activities at the site are still active.



Fig. 6.6 Smears left by rodents indicating their runway.

Gnawing mark



Fig. 6.7 (Left) Gnawed wooden door used by rodents as entry point



Fig. 6.8(Right) Gnawed sweet potato showing the parallel gnawing marks



The front teeth, incisors, of rodents are continuously growing. Therefore, rodents need to gnaw on object to keep their incisors short. Rodent can gnaw through materials such as wood, soft metal and plastic. Parallel marks will be left on gnawed objects.

Runway



Fig. 6.9 (Left) Gnawed runway used by rodents inside surface channel.

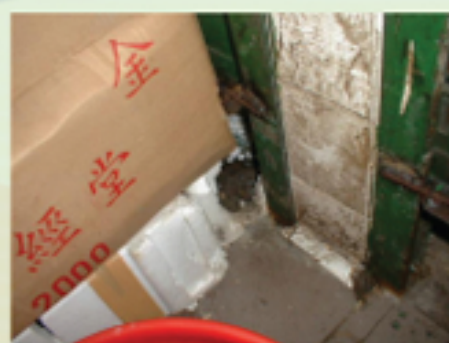


Fig. 6.10 (Right) Gnawed intact articles used by rodents as runway.

Rodent uses the same route to and fro their harbouring places and other sites. Rodent smear and gnawing marks are always found in the runway (Fig. 6.6 ~V 6.8). Drainage pipes, surface channels, false ceiling and other concealed places are commonly used as runway by rodents.

Foot marks

Foot marks left by rodents may be occasionally seen. Four digits on the fore limb and five digits on the hind limb can be seen in clearly on areas with layer of dust or powder.



Fig. 6.11 Foot marks left by rodents

