

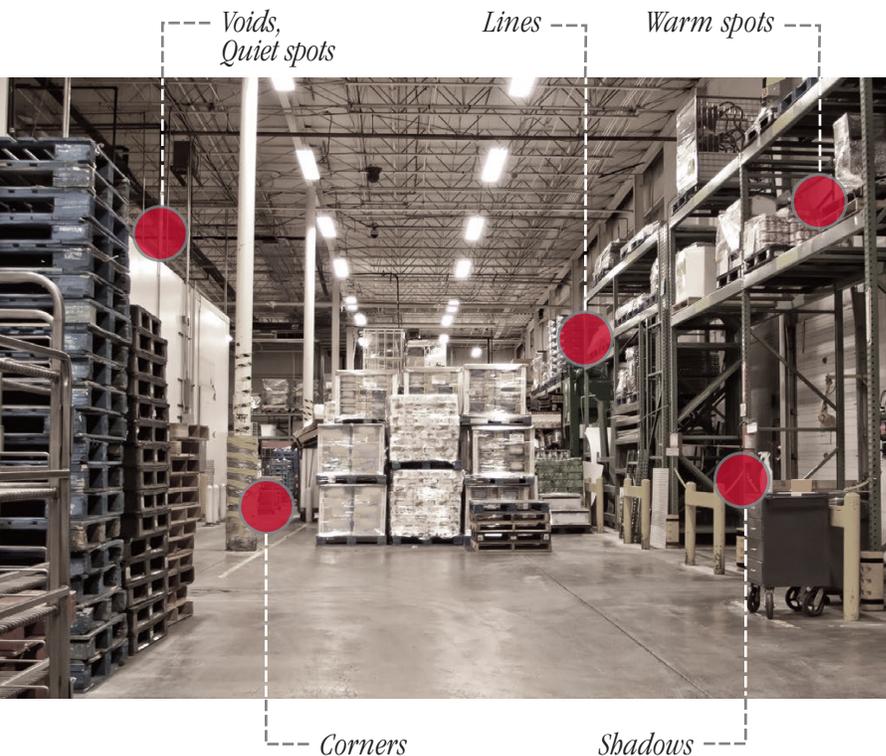


REMOVING RODENTS FROM THE RECIPE

Pest management should always be approached first with recognition of key pests and consideration of aspects of their biology where management options can be brought to bear. Rodents are recognized as a key threat for every kind of facility. It is not uncommon to trap an occasional mouse or have some feeding in exterior bait stations, but infestations can never be tolerated in or around food facilities. A number of food companies have escalation protocols in place to be sure management notifications and appropriate responses are taken if there are multiple rodent captures or risks of rodents gaining a foothold.

There is common knowledge about many aspects of rodent biology that contributes to our management techniques for these pests. We know they can enter through small holes of only $\frac{1}{4}$ - $\frac{1}{2}$ inch in size, so doors need to close tightly and holes leading into potential harborage need to be sealed. We know rodents tend to travel along floor-wall junctions which dictates many trap and bait station placements. We know that mice are more curious than rats and thus easier to trap.

Let's examine some lesser known aspects of rodent biology and behavior and consider some more advanced strategies. Food facilities are often large, sprawling complexes with potential risks from rodents indoors and out. But rodents will typically only utilize narrow travel pathways and small areas for most of their activity. So, recognizing and inspecting to locate the most attractive travel routes and potential harborage can allow the most efficient placements for traps or outdoor bait stations. The world's foremost authority on rodent management, Dr. Bobby Corrigan, suggests six words to summarize this concept: lines, shadows, corners, warm spots, quiet spots and voids.



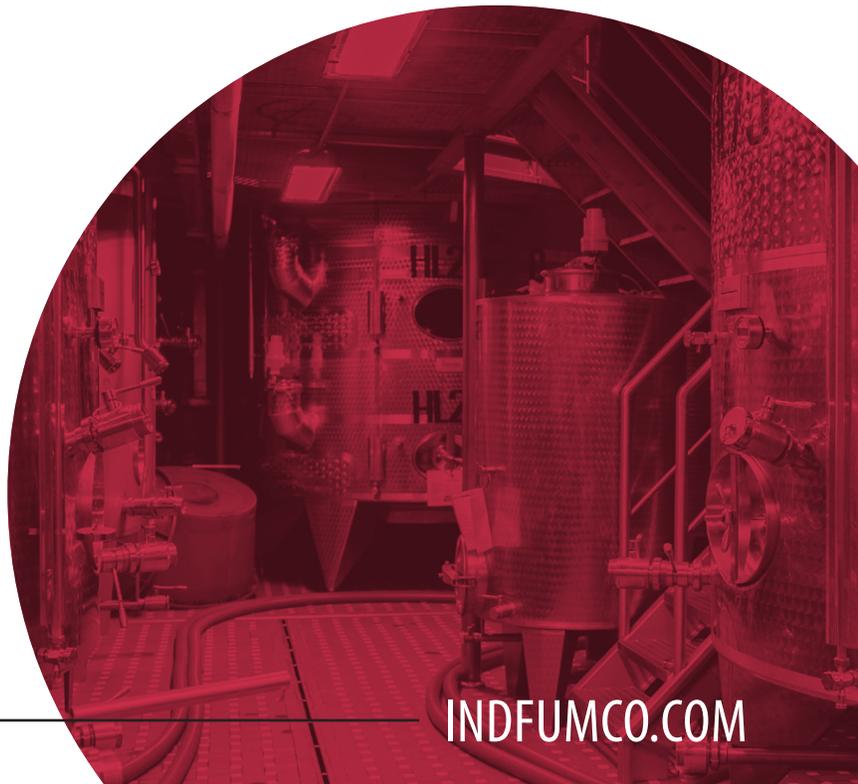
- **LINES** can be wires, pipes, beams, vegetation lines or other kinds of borders in addition to floor-wall junctions. Remember that rodents are excellent climbers and are active at all levels of elevation.
- Rodents are secretive and will tend to prefer shaded, **SHADOWY PLACES**, or nocturnal activity. So there may be lighting or warehouse arrangement designs that promote brightness, or unavoidable shadowing areas ideal for trap or bait station placements.
- Rodents will tend to pause at **CORNERS**, so these are efficient places to inspect for droppings or urine spots, and place traps or bait stations.
- Small animals like rodents are challenged to maintain body heat, so appliances or equipment that produce a little heat above the ambient temperature can be attractive **WARM SPOTS** and for nesting.
- Sometimes a number of these attractive features accumulate together in the same places that are also more **QUIET** than other surroundings, or in a **VOID**.

The best inspection tool for rodent activity is a good flashlight. Rodents will leave droppings everywhere they are active. The best use for UV inspection lights is not for scanning trailers, etc., but rather to discern which of the potential travel routes in a facility are actually being used. Regularly used travel routes or holes will often feature grey rub marks from the oils in rodent fur.

Monitoring data proves that rodent activity is not uniform around facilities. Most audit standards, and many food companies allow modification of device placement patterns based on monitoring and risk. Most people can recognize, for example, that a long blank wall with no openings may not require the same density of bait station placements as another area with shipping and receiving or product risks. It may be prudent to reduce device densities in some areas and increase them in others. Exploit differences in rodent species' biology, and behavior. Mice and roof rats have nibbling feeding habits, for example, unlike Norway rats that will eat a lot at one place. Consider how you might interpret and react to chronic, low-level activity in some area. A mouse or roof rat may need to nibble at an isolated station over a number of days to accumulate a toxic dose of bait, but a cluster of closely-spaced stations could encourage nibbles here and there and achieve a toxic dose much faster. Rodenticide baits differ in their palatability also, so selecting the most palatable bait that can compete with other food sources can be a key to success. Consider the differences in preferred habitats of different rodent species when it comes to sanitation, exclusion, trapping and baiting. Rodent threats can come from below ground to the roof top!

Catching rodent issues early is important to help prevent an infestation from occurring. It can take time to treat for rodents, so the earlier the process can begin, the better. Consider upping your Integrated Pest Management approach if you have frequent rodent sightings, as this proactive approach is the best way to reduce your risk.

Jerry Heath, Board Certified Entomologist, is Staff Entomologist serving a broad range of technical service needs for IFC's food industry clients. With nearly forty years of experience, Jerry's career has focused exclusively in the fields of entomology and pest management in academic and several industrial settings. Since 1937, IFC is the only national pest management company focused solely on the food industry. For more information, visit www.indfumco.com or call 800-477-4432.



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