Hantavirus: Are Your Employees at Risk

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Interview with Patricia Hottel, Technical Director, McCloud Services

A recent outbreak of hantavirus at Yosemite National Park has raised concern about potential rodent infestation and hantavirus outbreaks in manufacturing plants, including food facilities. Patricia Hottel of McCloud Services discusses the risks of hantavirus and how food companies can keep their employees safe from the disease.

Q: Briefly tell us about the recent hantavirus outbreak at Yosemite National Park.

A: At last count, nine visitors to Yosemite National Park contracted hantavirus while visiting the park, and three people died from the disease. The majority of campers were staying at the Signature Tent Cabins in the Curry Village site. The park service is still investigating the cause, but possible causes include contamination in cabin sites by deer mice or storage sites associated with the cabins.

Q: What is hantavirus and what risks does it pose to food manufacturing facilities?

A: Hantavirus is not a foodborne illness, so it doesn’t pose a risk to the food a facility produces but can place employees at risk, especially if they are involved in pest management procedures involving one of the rodent species that carries hantavirus. Proper training should be provided to these employees on how to

prevent transmission. It is also important to educate employees who may be involved in cleanup of fecal material and urine of the carriers. The disease is relatively rare, but it does have a fairly high fatality rate.

Q: How is hantavirus spread, and what risks does it pose to plant safety?

A: It is important to make sure employees are educated in the proper procedures to follow when handling equipment or surfaces which may have been contaminated with fecal pellets or urine of the hantavirus-carrying rodents. Hantavirus is transmitted by airborne droplets of urine, saliva and fecal material. The mode of transmission to humans is through inhalation. So the concern is for protecting employees and contractors who might be involved in the capture, control and clean-up of these rodents.

Q: What conditions are favorable for deer mice infestation?

A: We have seen higher numbers of deer mice in certain parts of the United States this year. When environmental conditions such as temperature are more favorable and food is in greater abundance, we expect populations to be higher. We had an unusually warm winter in 2012, and that seems to be contributing to higher populations of rodents in general, including deer mice.

Q: What can food companies do to prevent deer mice infestation and Hantavirus?

A: Exposure to hantavirus can be reduced by managing rodents around the facility. Many of the procedures used for managing commensal rodents like the house mouse will work for deer mice. Reducing conditions which support the growth of rodent populations around the facility must be done in conjunction with exclusion methods. Keeping vegetation away from the structure and reducing exterior food spills are important.

Seeds, insects and weeds around the structure can provide food sources for these animals. They will also take advantage of food spills, which may contain grains, nuts, pet food, seeds or grain-based products. Maintaining vegetation-free barriers and reducing food spills are important in deer mouse management.

Sealing and preventing access are also critical. If there are openings in the building which lead from the exterior to the interior, use sealing materials like the metal meshes (Xcluder or Stuff-it for example) to seal these small openings. All openings ¼-inch or larger should be sealed. Keep exterior doors closed while not in use or install screens if doors are left open for ventilation purposes. Screens must be a minimum of ¼-inch mesh. Screen windows and vents which may provide access if they are left open or do not have tight fitting louvers.

Traps or monitoring blocks can be used on exterior areas for monitoring purposes. Traps are also advised on interior areas. Multicatch (curiosity) traps can be used on interiors and exteriors. Mouse-sized snap traps or clam-shell type traps can be used inside stations as well. Snap traps can be baited with peanut butter (if allergens are

not a concern), sunflower seeds or commercially-available lures. Sealing of interior areas to prevent access to wall voids and sub slab areas is also advised.

Q: If a facility is breeched by deer mice or a hantavirus outbreak, what actions should be taken?

A: If, despite preventative measures, deer mice enter the structure, interior traps should be used to eliminate the pests. Snap traps can be baited as listed above. Fortunately, the interior of a food plant is not the preferred habitat for deer mice and they rarely will build up populations inside the typical food-plant environment. Most deer mice captures in food plants are new introductions from the exterior. However, they may nest in exterior sheds, garages or similar areas.

Good practices for decontamination of surfaces and PPE should be followed for employees. These practices can be found at the Center for Disease Control Site at www.cdc.gov/hantavirus [1] and will include:

Use of disinfectants to sanitize surfaces which may have become contaminated with rodent feces, urine or nesting materials

Double bagging of captured rodent carcasses and removal to exterior disposal sites

Use of gloves and, in some cases, respiratory protection when conducting cleanup or handling equipment; respiratory protection will be required, especially in enclosed areas where there is a chance of inhaling airborne contaminants

Washing hands post cleanup or after handling rodent equipment

For more information, please visit www.mccloudservices.com [2].

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