



Technical Bulletin

Setting the Standard for Food Safety and Pest Management Solutions

November 2018

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Are you Going to Eat That?



When you last went grocery shopping, did you have to throw out food in order to make room for the newest purchases? If so, you're like many Americans. It's probably not shocking to hear that Americans waste an unbelievable amount of edible food. Studies show that around 50 percent of all produce in the US is thrown away, around 60 million tons each year. Reports indicate that wasted food is also the single biggest occupant in American landfills; according to the Environmental Protection Agency.

So, what can be done about this unsettling trend? There are multiple options to curb the waste and keep it out of the landfills. Recycling programs for food waste via composting and energy generation and food bank programs can help reduce waste.

When food waste reaches the landfill, it is often in plastic bags, buried and deprived of oxygen, the food barely breaks down, decomposition happens very slowly, and the food releases excessive amounts of methane throughout the process. Food manufacturers and other food handling establishments can, and should, implement waste reduction goals, and seek out local farmers or food recyclers who can repurpose the waste into animal food or feed. Distribution centers can receive tax deductions for donating to local food banks those goods that may be due to expire soon or have slight damage to packaging. There are options available to keep the food waste out of the landfills.

Submitted by: Rich Gibson, ACE, CHA

The House Mouse



Source: www.rottlar.com

Order: Rodentia **Family:** Muridae **Species:** *M. musculus*

The house mouse is a small mammal, characteristically having a pointed snout, small rounded ears, and a long naked or almost hairless tail. It is one of the most numerous species of the genus *Mus*. Although a wild animal, the house mouse mainly lives in association with humans (commensal).

Mice reproduce fairly rapidly, it only takes between 19 and 21 days for a pregnant mouse to give birth to a litter. Each litter typically consists of five or six mouse pups, but can have up to as many as 12 in a litter. Mice have a relatively short life span at only 12 months when living outdoors or 2-3 years while living indoors with the proper resources.

Mice are known carriers of diseases that can affect people, including Hantavirus, Leptospirosis, and Lymphocytic diseases along with many others. Mice can introduce parasites like fleas, mites, and ticks into your home and their urine can trigger reactions in some people.

Controlling mice can be tricky, especially if the population is high. The first step in control is exclusion; keep them out. Once mice establish themselves indoors trapping devices such as mechanical traps, glue boards and expanded trigger (snap) traps should be strategically placed in areas of activity, along walls and in areas where mice may nest or hide. Mice feel safe travelling along walls where their whiskers (vibrissae) can guide them and give them a sense of security so these areas are excellent for trap placement. Although possible and practical, rodenticides should never be used indoors unless all other control methods have been exhausted.

Submitted by: Rich Gibson, ACE, CHA



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Pharmaceutical Campus Breach



Recently, RKE was engaged by a major pharmaceutical company to conduct an integrated pest management (IPM) assessment to help determine causes of insect, and other arthropods, breaching sensitive GMP production space.

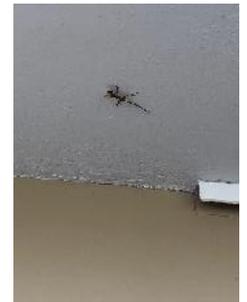
The types of insects included ants, fungus gnats, ground beetles and other miscellaneous 'light attracted' pests. Also found were problems with other arthropods such as spiders and lizards (yes lizards).

The assessment resulted in a few findings that were rather basic. Clearly the light attracted insects were gathering around the building's exterior light fixtures, and then finding their way inside through open doors, during shipping & receiving, and when staff would use pedestrian doors. Despite the use of air curtains and some strategically placed insect light traps, the pressure was just too great and allowed for insect penetration to find its way into the GMP space.

The active insects around the perimeter light fixtures were attracting spiders to the area. There was a tremendous amount of spider webbing, and live spiders with egg sacks.

Another interesting observation was excessive amount of 'moisture indicators' such as earwigs, pill-bugs and millipedes. These other arthropods were showing up in significant numbers inside of the buildings on sticky-traps. Obviously, these pests were originating from outside of the building and then working their way inside through ingress points and under door thresholds.

An inspection of the outside grounds revealed that new stone flower beds had a non-porous fabric under the stones that was trapping moisture from the water sprinkler system. The constantly damp conditions made for a perfect environment for the earwigs, pill-bugs and millipedes.



To address the pest pressures and reduce the potential for breaches into GMP space, a comprehensive approach needed to be implemented. The first goal was to modify the exterior environment, both the lighting and the stone flower beds. For the perimeter lighting, we had the plant change to LED wall sconce fixtures. There is a lot of research on the value of LED lighting, and one of the many benefits is that LED is far less attractive to insects than fluorescent light. This significantly reduced the number of insects gathering around overhead and pedestrian doors, also in turn this reduced the number of spiders that existed because they would feed on the insects.

For the stone flower beds, the non-porous fabric was removed and the water sprinklers were adjusted to avoid the overly damp conditions.

Finally, scheduled exterior perimeter applications were performed using residual, repellent materials around the building. The materials and formulations were rotated and included microencapsulates and wettable powders.

The comprehensive approach resulted in an immediate trend that reduced the number of insects and other occasional invaders that were showing up in monitoring devices.

By the way, with the reduced insect and arthropod activity the lizards also began to disappear.

Submitted by: Hank Hirsch, BCE