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Copesan is an alliance of regional pest management companies that are united as a single entity for the sole purpose of providing quality pest solutions to businesses with locations throughout North America.

Holiday Pest Management

When you think of a freshly cut evergreen tree, the aroma of holiday cooking or a fire burning in the fireplace, you probably envision the wonderful sights and smells of the upcoming holidays.

But take another look. These wonderful holiday staples could bring hundreds of insects and other pests into your facility or home. Here are some tips to prevent these pests from ruining your holidays.

Check plant material

Since Christmas trees, greenery, plant decorations, flowers and holiday plants can harbor many different kinds of pests, before bringing any plant materials indoors, check them carefully. Then check them occasionally over the next few days for emerging pests.

When these “bugs” warm up inside, they will start their spring and summer activities, which means you could find hundreds of hatching insects a few days later. Some common surprises include praying mantids, spiders, caterpillars, mites, psyllids, aphids and other assorted pests.

If any of these pests come alive, take the plant material outside immediately and/or call Copesan or your local Copesan Service Center for holiday relief.

Examine firewood

Similar to plant material, spiders and insects like ants, beetles, cockroaches, termites and wasps frequently live in, or overwinter under, loose bark or in cavities in firewood. Therefore, make sure you examine your firewood, only bring enough wood inside to last the day, leave loose bark outside, and only bring infested pieces in when you can put them immediately on the fire.



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Inspect stored holiday items

Since ants, beetles, moths, spiders, centipedes, mice, geckos, lizards and snakes may take up residence in your holiday decorations while they are in storage, consider unpacking these decorations outside or in a low-risk area. Also, avoid storing wool items, food-based items, plant materials and seeds that will attract pests.

If you discover only a few pests (dead or alive), use a small vacuum cleaner to get rid of them. But if you encounter large numbers of pests, call Copesan or your local Copesan Service Center immediately to identify and treat the problem appropriately.

Examine holiday gifts

Delivered holiday packages, especially food gift packs, should be examined carefully because they may have become infested with food pests or indoor pests, such as cockroaches.

If an item is contaminated with cheese mites, meat maggots, bran bugs, flour beetles, Indian meal moth caterpillars or other food pests, place the food package into a freezer for a few days and then discard.

For extra protection, do not

store food items for more than two weeks unless you take extra precautions, and keep packages cool or refrigerated until they are opened.

Check the luggage

Your holiday guests may bring more than gifts to your house. Bed bugs that hitch rides in the luggage of travelers have become an increasing problem throughout the country and may be unintentionally introduced into your home or facility.

If bed bugs are suspected, do not bring the luggage inside. Instead, carefully unpack it outdoors and seal infested clothing in a plastic bag. Next, wash and dry the clothing at the highest heat that the garments can tolerate. Then tie off and immediately dispose of the used plastic bag in an outside trash bin.

Luggage can also be sealed in a large plastic bag with a Vapona (dichlorvos, DDVP) resin strip for two or more days. If it is not damaged, this plastic bag and its resin strip can be used repeatedly for months before replacing the Vapona resin strip. Do not allow continuous contact of items with the exposed resin strip because an oily stain may result.

Clean before closing

Insects can multiply to huge numbers quickly if food and breeding materials are available. For example, during a two-week holiday shutdown, flies can reach their fourth generation.

Before closing for the holidays, make sure all food items are taken out of employees' lockers and desk drawers and all garbage is removed from the premises.

Use proper food safety practices

Bacterial "bugs" and food pathogens don't restrict themselves to summer picnics. Be careful to keep hot foods hot and cold foods cold during holiday celebrations. Dispose of any food item that has been at room temperature for four hours or longer, and always wash your hands before and after handling food.

Happy pest-free holidays!

Copesan wishes you enjoyable, pest-free holidays, and a Happy New Year! If you need to update your pest program or have a pest emergency, call Copesan or your local Copesan Service Center.



A Thoughtful Act of Pest Management

By Mark "Shep" Sheperdigian, Vice President of Technical Services for Rose Pest Solutions in Troy, Michigan

I was in a hospital kitchen once, trying to solve a chronic vinegar fly problem. It had been an ongoing infestation and finding the source had been elusive. We had performed a number of intensive inspections all with disappointing results.

I was leaning against an internal pillar near one end of the kitchen staring across the room trying to understand where the breeding site may be hidden. If it was obvious, we would have found it long ago. As I stood there in thought surveying each area of the room, a member of the hospital staff walked into the room and saw me.

I saw her approach me and, in response to her unspoken question, I introduced myself: "Hi, I'm with Rose Pest Solutions, and we're working on this fly problem."

"Well?" she replied. "Get to it!"

She thought I was loafing! I was mortified! I was about to explain that, although thinking may have no application in her duties, it was an integral part of mine. Then I thought better of it and gave a much softer response.

As it turned out, hidden water problems under the floor kept us from finding the breeding sites. The solution to the problem lay in construction, not sanitation.



Stop and think

While it is obvious when a service specialist is servicing a bait station, checking a pheromone trap, or cleaning out an insect light trap (ILT), what does it look like when the service specialist is deciding what the trap catch means? What does it look like when the service specialist is surveying a room for the most likely location of a fly breeding site? The act of thinking through a problem requires you to stop and look around and do nothing but observe and think for a minute or two.

If a service specialist finds a rodent dropping in a place one wouldn't expect to find one, it may be necessary to slowly scan the area above and around the

finding to ascertain the most likely source of the dropping. Did it fall from above? Did it fall from a passing forklift? Did a mouse pass this way? You need to stop and think.

If a service specialist finds small flies in a light trap in a corner of a production area but there are no obvious suitable breeding sites nearby, it is necessary to think through the highest probability explanations. Did the flies enter from outside areas? Are they coming from beneath the slab? Is there a hidden breeding site within the area not immediately evident? You need to stop and think.

If a service specialist sees some new construction in an area of the facility that has opened several walls, removed some old equipment and added some new equipment, what effect will this have on the pest management program? Which pests could be expected to enter such an opening – birds, rodents or insects? If pests had entered the facility, where would they have gone? How would you look for evidence? You need to stop and think.

There are many tasks performed during the administration of an integrated pest management

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(IPM) program. Common operations include:

- Inspecting for pests, pest evidence and conditions conducive to pests.
- Servicing rodent control stations, light traps and other monitors, leaving them cleaned and reset with the service recorded.
- Making applications when and where necessary of baits and contact insecticides either to remedy or prevent a specific pest problem.

- Filling out documentation, making reports and updating the logbook.

All four of these basic operations may include some time for thinking, and a person actively involved in thought may appear to be inactive, if only briefly. While productivity models usually involve someone in motion, pest management services are most valuable when active thinking is part of the mix.

Certainly, it is in everybody's

best interest if service is provided efficiently, as well as effectively, but if there is no time built in to the program for discretionary inspections, active questioning and problem solving, there is more likely to be a crisis in the future. An ounce of stop and think is worth a pound of reactive response.



Using the Black Light for Rodent Urine Inspection

By Richard Berman, Technical Director, Waltham Services, Waltham, Massachusetts and Eric H. Smith, Director of Technical Services, Dodson Pest Control, Lynchburg, Virginia

One fact about mice and rats is they urinate and defecate frequently. While this is unappealing information for people who have these pests in their facilities and homes, it's a helpful fact for pest managers who use black lights.

Since amino acids in urine will "glow" when exposed to ultra violet (UV) light rays, black lights may be a useful tool for tracking these incontinent rodents.

Here's an overview of how black lights can detect rodent presence:

- Rodent urine is typically deposited as a series of droplets in a line, with the larger droplets first, trailing off to smaller and smaller droplets.
- Since Norway rats drag their tails behind them, a smeared line may be noticed through the urine stain.
- In heavily contaminated areas, urine deposits may form large patches that are surrounded by scattered smaller droplets of various sizes. Large patches that show a radiating pattern away from the main deposit are not usually

caused by rodents.

- Rodents like to move along walls when they travel, so they will leave grease stains that may also fluoresce.
- Rodents may also sit on the edge of boxes or on pallets and urinate, with urine dripping down the sides that may also fluoresce, especially on cardboard and paper. In this case, the urine stain will look like a line of paint dripped from box to box.

Since rodents like to be hidden, product that is stacked with

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a center well also needs to be inspected for rodent urine. In addition, urine deposits are often accompanied by hairs, droppings, gnawed product and nesting material so a flashlight also should be used to inspect for rodent evidence.

Know the glow

The key to identifying rodent urine is where you find it and the pattern. If you see something fluorescing evenly along the edge of a carton or along seams, it's not likely rodent urine. An evenly distributed pattern of fluorescing, like stippling, is also probably not rodent urine.

Fluorescence along a runway may indicate possible rodent presence more than glowing isolated in the center of a surface, with no evidence leading to the edge of that surface.

Here are other materials that will glow under a black light:

- Urine from pets will glow an amber color because of the protein waste product excreted.
- Rodent urine will glow a bluish-white color when fresh and a yellowish-white color when old.
- Rodent hair will glow a bluish-white color.



- Be aware, many other substances like mold, glue, bleach, certain inks and dyes, oil, refrigerant, transmission and hydraulic fluids and grease lubricants will also glow when exposed to black light.

While black lights are a help in identifying rodents, they do have limitations. Since urine deposits on walls and floors get covered by dust and debris, the black light is not a good tool to make wide area, structural inspections.

The black light is most effective when used to confirm rodent presence and contamination that was previously suspected by visual inspection.

Also, we advise against using a black light as the sole indica-

tor of rodent presence. If you find evidence glowing, use a flashlight and visibly look for hairs, droppings, damage and nesting evidence to confirm rodent presence and/or contamination. One or more of these signs are often present if there is rodent contamination.

**This article is based on information from Robert Corrigan's book *Rodent Control: A Practical Guide for Pest Management Professionals*. If you would like more information on using black lights, see the more detailed "white paper" version of this article on Copesan's Web site at <http://www.copesan.com/docs/Blacklight.pdf>.*



West Nile Virus Control Programs: How to Plan for 2007

By Steven Graff, Quality Assurance Manager, Abell Pest Control, Ontario, Canada

When it comes to running a business, all factors that could affect its success need to be considered. One such factor is employee safety. With that in mind, you should assess the risk of West Nile viral encephalitis (WNV) to your employees' health.

WNV affects people in different ways. The majority, or four out of five, people experience no symptoms. Some people will only experience mild symptoms, such as fever, head and muscle aches, and possibly swollen glands. However, one in 150 persons will react more severely to the virus, experiencing coma and convulsions, which sometimes result in death.

Biting female mosquitoes – with various species of *Culex*, *Aedes*, and *Anopheles* mosquitoes being the most common vectors in North America – transmit WNV.

These mosquitoes breed in roadside and parking lot catch basins, pools of stagnant water and potentially within any object that can hold water. One or several of these habitats are usually found around business settings and homes.

What's your risk?

While suitable habitat and vectoring mosquito species may exist in your region, the real threat exists only when the virus is present within local mosquito and bird populations. Birds are the natural host for WNV with transmission occurring when a mosquito feeds on an infected bird and then feeds on a human.

The key to determining what actions should be taken to prepare for next year's WNV season may be revealed by activity trends in previous years.



Infection rates are tallied by the Centers for Disease Control (CDC) and the Public Health Agency of Canada each year. These infection rates should be reviewed for both your immediate state or province, and the region in which you run your business. Activity in neighbouring regions also should be assessed because it

may give a more accurate picture of what is on the horizon.

For North America, WNV first appeared in the New York metropolitan area of the United States in the summer of 1999 and has spread out in all directions. In general, states and provinces away from the origin appear to be on the upswing for WNV cases, while locations closer to the origin are on the decline.

Steps to reduce the risk

Regions of North America that are facing an upswing in WNV cases need to plan for the implementation of an aggressive and thorough mosquito control program. Components of such a program could vary, and depending on the severity of risk, should include:

- Educating employees about the WNV and how to protect themselves from contracting it, such as wearing mosquito repellents and protective clothing, and remaining indoors during peak mosquito activity times.
- Performing an assessment and having regular inspections done on the property to identify standing water.
- Standing water should be eliminated or monitored

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weekly to determine larval activity.

- Treatment with larvicide should be performed when activity is observed.
- Monitoring and regularly larviciding catch basins.
- Installing mosquito traps along the perimeter of the property to intercept mosquitoes.
- Regularly conducting residual spraying and fogging of mosquito harbourage sites,

such as shrubs and plants near the building.

If you are in a location that has already weathered the WNV storm and are having dramatically fewer cases now, you may be able to downsize your mosquito control program and as a result, reduce your operating budget.

Put a program in place

By assessing your individual

situation and taking appropriate action, you will greatly enhance the safety of your business environment by protecting your valuable employees against WNV.

For help in putting an effective WNV program in place, contact Copesan or your local Copesan Service Center.



Information in this publication was researched and prepared by highly regarded experts within the pest management industry that are part of the Copesan Partnership. Copesan has more technical expertise located throughout North America than any other pest management firm. The IPM Update is a small sampling of that knowledge and expertise we provide to our clients.

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