

The background is a dark grey color with a repeating pattern of small white dots. Overlaid on this are various silhouettes of insects in shades of grey, including flies, bees, and ants, scattered across the page.

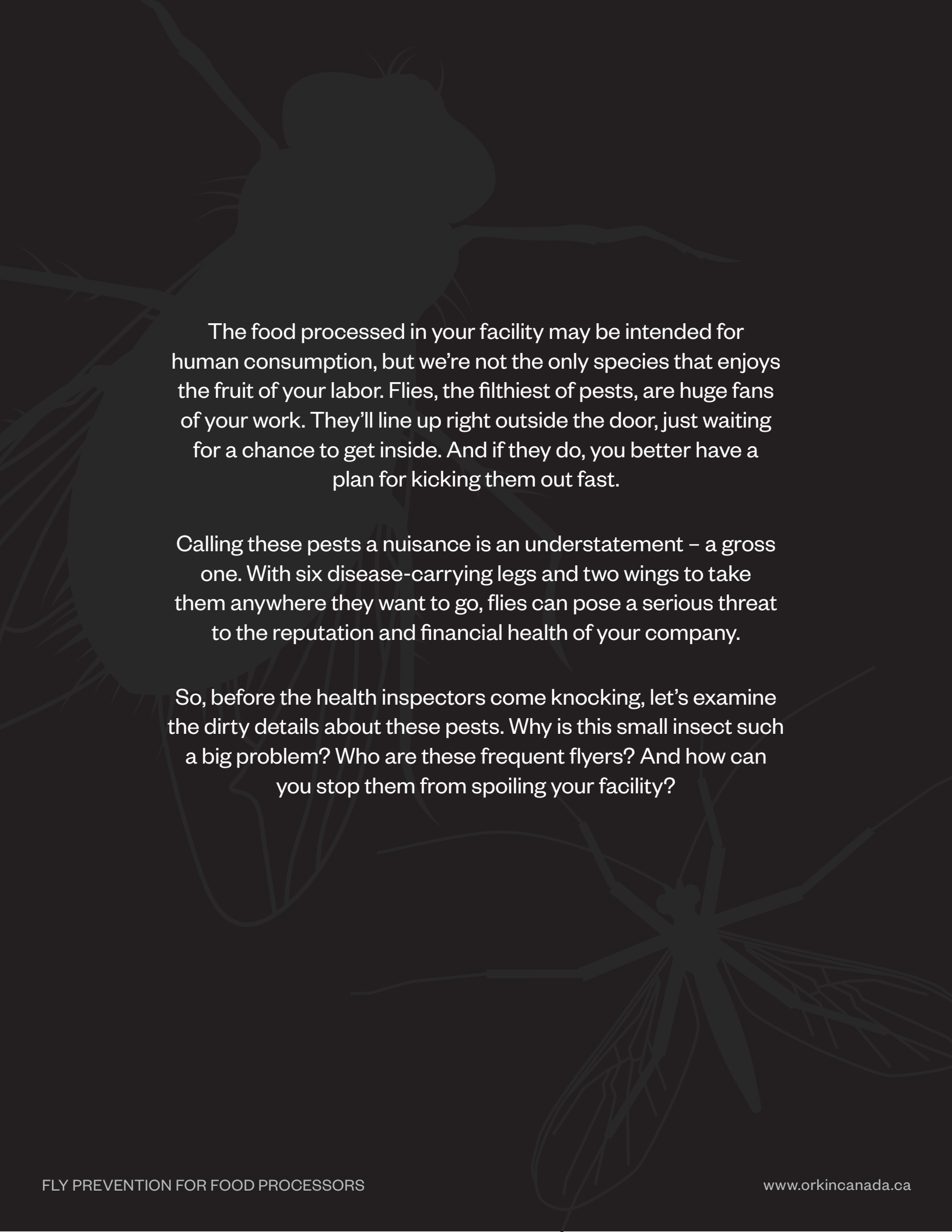
NO FLY ZONE

**FLY PREVENTION FOR
FOOD PROCESSORS**

ORKIN



CANADA™



The food processed in your facility may be intended for human consumption, but we're not the only species that enjoys the fruit of your labor. Flies, the filthiest of pests, are huge fans of your work. They'll line up right outside the door, just waiting for a chance to get inside. And if they do, you better have a plan for kicking them out fast.

Calling these pests a nuisance is an understatement – a gross one. With six disease-carrying legs and two wings to take them anywhere they want to go, flies can pose a serious threat to the reputation and financial health of your company.

So, before the health inspectors come knocking, let's examine the dirty details about these pests. Why is this small insect such a big problem? Who are these frequent flyers? And how can you stop them from spoiling your facility?

TINY PEST. GIANT PROBLEM.

Everyone thinks flies are nasty, but in an industry that values sanitation so highly, being “grossed out” is the least of your worries. If left unchecked, these filthy pests can take down a facility from the inside, one landing at a time. Wondering how something so small can have such a big impact on a business? Here are the dirty details.



RAPID MULTIPLIERS: Flies can really fly through a reproductive cycle. The female housefly can produce up to 1,000 eggs in her lifetime. These larvae develop to adulthood within a week to 10 days. With the right conditions, a fly population can grow and thrive at a remarkable rate.



EXPERT CONTAMINATORS: *E. coli*, *Salmonella* and *Shigella* are just a few of the gut-wrenching microorganisms that flies can bring into your facility. And as bad as that sounds, it’s not even the worst of it. A 2010 study by the University of Florida’s Institute of Food and Agricultural Sciences and Orkin discovered five previously undocumented bacteria species carried by house flies – bacteria that can cause food poisoning or even respiratory infections in humans. In 2018, microbiologists published evidence that fruit flies can spread strains of bacteria that are resistant to antibiotics.*

* <http://www.pbs.org/wgbh/nova/next/body/antibiotic-resistant-bacteria-found-in-flies/>



REPUTATION SPOILERS: Unlike many other insect species, flies have only one pair of forewings. This requires them to land often, giving them plenty of opportunities to leave behind droppings, regurgitated food and potentially disease-causing pathogens.



COSTLY PESTS: Contaminants aren’t just a health risk – they’re a liability for your business. If these filthy pests invade your facility and word gets out, you’ll be in hot water with regulators, suppliers and customers. Contaminated product + toxic reputation = spoiled bottom line and costly audit fines.



TOP FLIES FOUND IN FOOD PROCESSING FACILITIES

With an all-you-can-buffet just inside the door, it's no surprise that several members of the fly family frequent food processing facilities. Here are the species you need to be on the lookout for.

HOUSE FLIES

(MUSCA DOMESTICA)

You might think the common house fly is a residential problem, but these filthy pests are just as happy to take up residence in your facility. House flies carry and spread more than 100 disease-causing pathogens, such as bacteria, fungi and viruses, which cause many illnesses among humans, including salmonellosis, typhoid, cholera, bacillary dysentery and infantile diarrhea.



APPEARANCE

House flies have a **dark gray to black body with four lengthwise stripes on the thorax** and semi-transparent wings. **Bulbous red compound eyes** are set slightly further apart in the female of the species.



BEHAVIOUR

Glue-oozing toe pads allow **these pests to rest easily upside down on ceilings and high on walls**. Their compound eyes offer them an **impressive range of sight** that, coupled with a well developed sense of changing air currents, help them evade fly swatters and rolled up newspapers.



LIFECYCLE

House fly eggs are laid in almost any warm, moist material that will supply suitable food for the larvae (maggots). **The female may lay a total of five to six batches of 75 to 100 eggs in her lifetime**. In warm weather, eggs hatch in 12 to 24 hours.



FEEDING

House flies don't have chewing mouthparts and thus are on a strictly liquid diet. Their saliva liquefies food before sucking it up through a sponging, straw-like proboscis. And they aren't picky. **House flies will slurp up whatever food waste they can find in the dumpster outside your facility, as well as carrion and excrement**. If those waste collection areas are near an entrance, the flies will often migrate inside to feast on fresher fare, leaving fecal matter everywhere they land.

DID YOU KNOW?

House flies can fly at a speed of up to 8 kilometres per hour.

VINEGAR FLIES OR FRUIT FLIES

(DROSOPHILA SPP.)

Just from their name, it's obvious that fruit flies are a food processor's worst nightmare. And not just for facilities that process fruit. These pests also love to dine on dough, beer and vinegar – anything that's produced with yeast.



APPEARANCE

Tan in color, fruit flies have **dark red eyes and black rings** on their 1/8-inch long bodies.



BEHAVIOUR

True to their name, fruit flies **flock to overripe or decaying fruits and vegetables**. This attraction to moist organic matter means you may find them in waste disposal areas outside your facility, employee break rooms and wherever recycling bins are located. And because they're not strong fliers, you'll find them living near the closest available source of food.



LIFECYCLE

Fruit flies have tremendous reproductive potential. **A female may lay up to 500 eggs in her lifetime**, depositing them in decaying organic matter or fermenting fruit. With a short lifecycle – going from egg to adult in about a week – it doesn't take long for an infestation to start.



FEEDING

Carb-loving fruit flies find the yeast produced during the decomposition of organic materials irresistible. These nuisance pests also have a **sweet tooth for sugary substances like alcoholic beverages**. And they go bananas for, well, bananas.



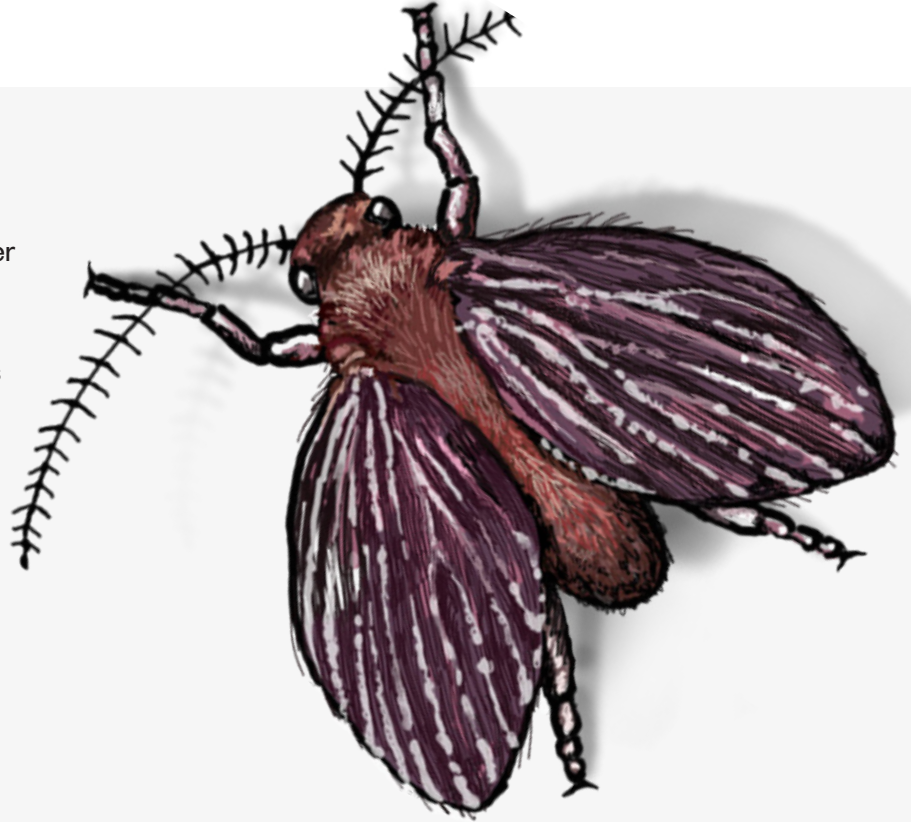
DID YOU KNOW?

Fruit flies were the first animal launched into space in 1947 – better there than in your facility.

DRAIN FLIES

(FAMILY PSYCHODIDAE)

Rinsing food waste down the drain is never a sensible sanitation practice, especially when you're dealing with drain flies. But when it comes to habitat, these pests don't limit themselves to their namesake. Wherever there is a buildup of readily accessible, decaying organic matter, that's where you'll find drain flies.



APPEARANCE

Dark-winged drain flies are **sometimes called moth flies because of their furry appearance and long-feathered antennae**. At rest, the drain fly folds its wings over the body in a roof-like manner.



BEHAVIOUR

Drain flies are very weak flyers, so they **prefer to crawl along damp shoots and wet processing equipment**. You can also find them scurrying about in employee spaces, such as break areas and locker rooms.



LIFECYCLE

Drain flies need standing water to reproduce and **commonly breed in raw sewage** under slabs where undetected broken pipes may be located.



FEEDING

Nutrient-laden organic material built up in drains is their main food source. They are called "drain flies", after all.

DID YOU KNOW?

Covered in water-repellent hairs, drain flies are difficult to drown.

PHORID FLIES

(FAMILY PHORIDAE)

Phorid flies? More like horrid pests. Our final fly has a real taste for the macabre – dead carcasses, specifically – and the looks to match.



APPEARANCE

The phorid fly's **most notable characteristic is its humped back**. In most cases, they are light or dull brown and may occasionally be yellow. Phorid flies **can be mistaken for fruit flies** but they lack the fruit flies' signature red eyes.



BEHAVIOUR

Rather than fly, these insects **often scuttle rapidly across surfaces** laden with decaying organic material. From sewers and dumpsters to break areas and locker rooms, if not stopped, these death-loving pests will transport their filth right onto food material.



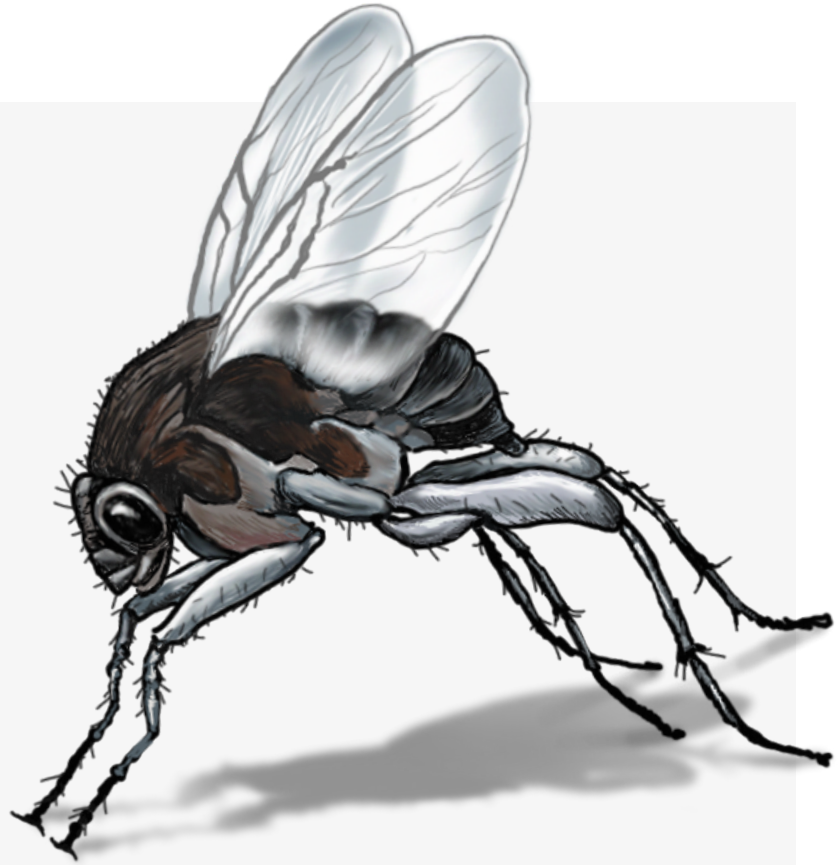
LIFECYCLE

Phorid flies breed in decaying organic matter. **Females lay up to 750 eggs in their lifetime**. Eggs can take more than 20 days to become adults.



FEEDING

As with many of their fly brethren, **decomposing fruits and vegetables, rotting meat, sewage and feces are part of the phorid fly diet**. They thrive off the moisture found in the bottom of trash receptacles, under processing equipment and in dirty mop heads.



DID YOU KNOW?

Certain species of phorid flies are used as biological control agents of fire ants. Laying their eggs in the ant's thorax, the larvae devour its brain and ultimately cause its head to fall off.



FLY MANAGEMENT PROCESS FOR FOOD PROCESSING FACILITIES

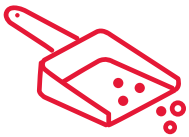
Knowing how to identify a fly is only helpful if you also know how to stop it. For food processors who are ready to can the newest buzz around the facility, here are the ingredients of a successful fly management program.



INSPECTION

If you want to keep flies out of your facility, then you first need to find out how they're getting inside. That's where inspection comes in. Don't ignore the buzz! Find the source of the problem and put a stop to these filthy pests once and for all. You can start by inspecting these pest hotspots and points of entry.

- Waste disposal areas outside your facility might be serving as breeding and feeding sites.
- Organic matter that builds up around clogged floor drains and leaky drain lines is prime real estate for these six-legged pests. Use a drain scope to check for pipe cracks.
- Small flies, such as phorid flies, may be breeding under the building slab.
- Improperly sealed dock doors and entrances that have been propped open make it easy for flies to get inside.
- Check all incoming shipments. Fly eggs are too small to notice, but adult fly activity is usually a sign that more are about to hatch.



SANITATION

Flies love filth, which is why sanitation is such an important part of every facility's pest management plan. But sweeping up floors and wiping down counters isn't enough to keep these pests away. To truly protect your facility, it also has to pass the sniff-test. Start using these sanitation best practices today.

- Smells coming from wet garbage, overripe or out-of-date food products, or organic matter buildup on equipment or in drains is a signal to flies that food is nearby. Put a plan in place to make sure those odors don't become too pungent to resist.
- Use a first-in-first-out approach in food storage areas to reduce the chance that preprocessed materials will become out of date.
- Keep tight lids on interior trash receptacles and routinely change the liners.
- Make sure drains are checked and cleaned periodically with a biological drain cleaner.
- Place exterior dumpsters as far away from the building as possible, and work with your waste management company to routinely clean or rotate the dumpsters.
- Enlist your employees' help in good sanitation practices.



EXCLUSION

Exclusion is exactly what it sounds like – keeping flies out. But pulling that off isn't as easy as it sounds. Here's a simple guide for this not-so-simple step in your pest management plan.

- Caulk any cracks or crevices around the exterior of your building that could allow flies to slip into your facility.
- Seal all doors (including loading dock doors) and windows with weather stripping.
- Install correctly fitting door sweeps to help keep flies out.
- If possible, add a second set of sliding doors at outside entrances.
- Fill in any cracks you find near the base of rooftop air handling units.
- Employ positive airflow (air that flows out of, not into, a building) or air curtains (using high speed fans to create a “wall” of air that flying insects have difficulty crossing) at entrances and exits.
- Train employees to keep doors closed, both during the day and after hours.
- If you do have to leave doors open for airflow, install screens or vinyl strip doors to help prevent flies from getting inside.



FLY LIGHTS & MECHANICAL TRAPS

While your sanitation and exclusion practices should keep out most flies, it won't stop them all. That's where fly lights and traps come in. By positioning these lights close to frequently used entrances but with the light pointing away from that entrance, you'll ensure it's the first light a fly sees if it makes it inside.

A pest control professional can select the light or trap best suited to managing the particular breed of fly that's pestering your facility. But once installed, it's important it remains on. Make sure employees know not to unplug these fly management devices when they're looking for a place to plug in their electronics. You can also work with a professional to figure out where to position traps and when to reposition them. Lamps, for example, are most effective the first 30 days, and should be moved monthly until a fly problem is under control.



FLY CONTROL PROGRAM

No food processing facility can escape the attention of flies forever. What may start as a small problem can quickly escalate into a full-blown infestation. That's why it's so important to have a plan in place for managing their eventual presence.

Despite the many similarities between the flies that frequent facilities, no two problems are ever quite the same. Maybe flies have found their way into an employee breakroom and are taking refuge under that leaky vending machine. Or maybe a punctured trash chute is giving them easy access to an otherwise sealed floor. Just two examples – both true – and evidence of how determined flies are to get inside and stay inside.

If you want to keep flies out and your reputation unspoiled, then you, too, will need determination. So, don't wait for these filthy pests to wreak havoc on your business.
Be proactive and keep your facility a “no fly zone.”

**Discover more interesting pest
information at www.orkincanada.ca**

