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PEST CONTROL



Pests are a common factor in many kitchens, but they do not have to be. This newsletter will discuss the common pests found in kitchens, their lifecycles and how to control them.

But first, what is a pest?

A **pest** is any animal or plant that causes harm to people, their food or living conditions.

Pests can:

- Carry disease-causing micro-organisms and parasites, for example, mosquitoes which carry Ross River virus and Murray Valley encephalitis.
- Attack and eat vegetable and cereal crops, for example, caterpillars and grasshoppers.
- Damage stored food. For example, rats and mice may eat grain in silos, rice or biscuits in shops and homes and contaminate this food with their faeces (droppings) and urine.

There are millions of organisms that can be classified as pests, the majority being insects. In the kitchen, domestic and commercial, the three most common types of pests are insects, birds and rodents.

Pest control is all the action taken to help keep the number of pests down to a level where the risk to people, their food and the environment is minimised. Professional controllers need to be used to inspect and treat premises regularly, at a recommended minimum of 6 week intervals. Pest control companies and their employees must be registered with the Department of Agriculture, and all pesticides must be registered and approved by the Department of Agriculture. These registration certificates (**PCO certificates**) must be kept on site along with records of each pest-control inspection (**service report**). And must be up to date. The PCO Certificate number must also correlate with the number the PCO places on the service report.

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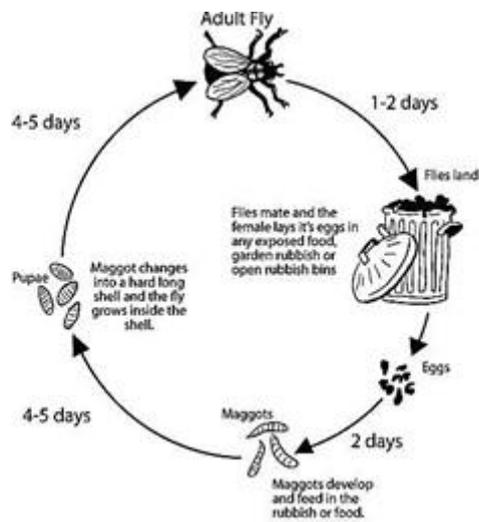


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FLIES

Flies are the most common pest found in kitchens, especially in the summer months. Not only can they be an irritation to chefs and patrons alike, they can potentially contaminate what's coming out of the kitchen—flies can carry billions of harmful microorganisms on and in their bodies, making them a potent disease vector for food poisoning and respiratory problems.

Adult flies lay their eggs in moist organic material, such as food scraps and dead animals. The eggs will hatch, and the larvae (maggots) will emerge. The maggots feed on the organic material and grow quickly. After four or five days the maggots move to dry soil and burrow down into it and turn into pupae. A special hard protective covering called a pupal case encloses each of the pupae while they continue to develop. Pupae are brown to black in colour and can sometimes be mistaken for mice droppings. After four or five days, pupae turn into adult flies. They break out of the pupal case, burrow up through the soil to the surface and fly away. Flies are able to travel many kilometres from their breeding place. However, if there are lots of flies around, it usually means there is a good breeding place nearby.



What can you do to prevent flies?

- Keep all external windows and doors closed, unless they have insect screens installed, to prevent entry.
- Practise clean as you go, clean up any spills immediately and keep lids on bins. Flies are attracted to food due to the odours.
- Install fly traps near external doors. UV light fly traps do wonders to keep flies and other flying insects out of the kitchen. However, please do not install these above any food preparation areas!

Flies are more than just a nuisance. Once you have corrected the issues inside your kitchen that allow them to thrive, you can guard against them.



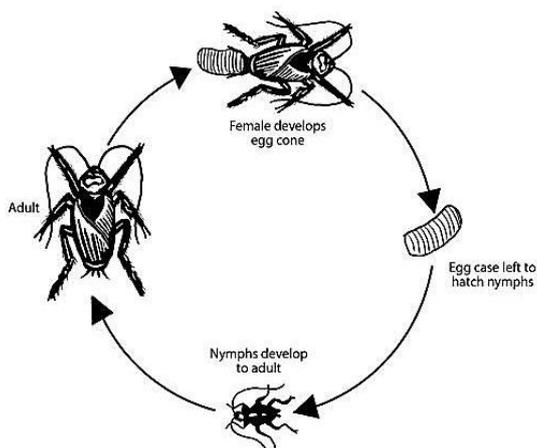
Did you know?

1. The common housefly is a perfect host for many types of bacteria and are proven carriers of microorganism that cause **gangrene, typhoid, leprosy, TB, amoebic dysentery, bubonic plague and listeria.**
2. The common house fly has no mouth, but rather an eating tube through which it regurgitates stomach fluid onto its intended meal. The fluid is then sucked up along with the dissolved nutrients.
3. An adult fly has a life expectancy of 30 days in warm weather.
4. The female fly may lay as many as 21 batches of 130 eggs of offspring.

COCKROACHES

Cockroaches are commonly present in commercial kitchens and present one of the most significant public health risks. They carry disease such as **dysentery, gastroenteritis, diarrhoea, typhoid, poliomyelitis and salmonella** and their droppings often causing **eczema and asthma**. The three most common cockroaches found in South African kitchens are the German Cockroach, Brown Banded Cockroach and the American Cockroach. Cockroaches are nocturnal, and spend the days in cracks and crevices near sources of food and water (in kitchens this may be near cookers and sinks). They will eat almost anything from food to leather, wall paper and other cockroaches. Food contamination mostly occurs when the cockroach moves from a refuse area to a food preparation areas.

The German and the American Cockroach are both primarily nocturnal, preferring warm/hot and humid conditions and narrow harbourages that are close to food and water. The life cycle of the German Cockroach is 100-200 days, where the female will produce 4-8 cases of eggs (each case with 10-18 eggs each) over her lifetime. The females glue these cases to their abdomen until the nymphs are about to hatch. The Brown Banded Cockroach, while very similar to the German Cockroach, glues its egg cases to furniture and cupboards. The American cockroach has a lifecycle of 450 days, producing 9-10 egg cases containing 12-16 eggs each.



What can you do to prevent cockroaches?

- Seal all cracks and holes in the ceiling, walls and skirting to prevent their entry.
- Prevent their access to food and water: store food in containers and do not leave any liquids standing overnight in buckets or sinks.
- Practice clean-as-you-go and be sure to properly clean and disinfect surfaces as cockroaches will be attracted to any dirt, grime or crumb left behind.
- Clean up spills and dirt immediately. German Cockroaches can be prevented by keeping crumbs and other particles of food from accumulating in and around counters and cabinets.
- Keep refuse in sealed bins.
- It is important to seek the help of a qualified pest control technician to get rid of the cockroaches in the long term.

Did you know?

1. Cockroaches can live up to a month without any food, and two weeks without water!
2. There are approximately 400 species of cockroaches in the world, and the vast majority are **not** pests.
3. Cockroaches can survive a nuclear explosion as they can tolerate high levels of radiation. Cockroaches have been found in Chernobyl, where the worst nuclear accident happened.
4. Cockroaches are fast. They can run up to 4.5km/hour!



OTHER INSECTS

Many other insects live and produce within stored foods, such as rice, flour and other grains. Stored insect pest infestations can be confined to a small area, but if left undetected, the infestation can disperse rapidly throughout your kitchen.

So what can you do to prevent stored insect infestations?

- Keep all dry goods sealed, preferably in robust, airtight containers.
- Temperature control: if possible, maintain your dry store at 16 degrees Celsius or below.
- Ensure high standards of hygiene and clean-as-you-go is practiced regularly.
- Denying access to your premises is the first line of defence- install tight fitting insect screens and ensure that they are maintained in a good condition.

COMMON STORED FOOD INSECT PESTS

Bean Weevil		Feeds mostly inside beans
Broad-horned flour beetle		Feeds on flour, dough, semolina. Often found in conjunction with moth larvae.
Dermestid/ larder beetle		Feeds on various animal products, including cheese
Grain borer		Pest of stored maize. Larva bores tubular passages into grain.
Indian Meal Moth		The adult moth causes no damage, but the larvae produce web material. Attracted to grain, grain products, fruit and nuts

Mammals:

Birds and rats can also wreak havoc in a kitchen. Rats especially can eat through soft plastic and cardboard containers to get to food, and also damage equipment and cables. To ensure these animals stay outside your facility, make sure that all cracks and holes in the ceilings and walls are sealed, all windows and doors remain closed unless fitted with tight fitting insect, undamaged screens, all food products are packed away in undamaged containers and the kitchens are kept clean.

