

» By Rosemary Ann Ogilvie.

Safer pest and rodent control

Certified organic processors, retailers and restaurateurs face the same risk of pest and vermin infestations as their conventional colleagues, but products they can use to deal with them are not readily available.

For this reason, the classic first line of defence is prevention, as stipulated in Australian Organic Standard (AOS) 6.1.19. "Trite as it may sound, prevention remains the best cure," says Dr Andrew Monk, chairman of the Organic Standards Committee. "And after all, this is what organics is all about."

Processors, restaurateurs and others are expected to have in place exacting clean-down procedures that ensure no vermin-attracting food wastes and crumbs remain. That's the starting point. The next step, says Monk, is to identify external and internal holes and gaps that could provide access to vermin such as rats, mice, cockroaches and birds, and carefully seal these to prevent entry.

"Another management technique – and it may sound as though we're trying to turn retailers, processors and restaurateurs into farmers by saying this – is observation of the surrounding environment, looking beyond the obvious," he continues. "In my auditing days, I regularly heard processors declare they didn't have vermin problems. I'd glance up a wall and notice a rat track – rats tend to follow the same path, and you can see the darkened sections where they travel. So when people tell you they don't have rodent problems what they're really saying is they haven't seen any rodents."

Rat Patrol

And while you may not encounter them in the course of your working day, there are always signs rats might be invading your premises. It's a matter of familiarising yourself with the indicators so you know what to look for when observing your environment.

As mentioned, rats tend to follow the same routes. Smudge marks become visible as oil and grease from the rat's fur rub off and build up on well-used runways. Here's a tip: Lightly sprinkle cornflour, clay or powdered limestone on a suspected runway over an area of at least 15cm x 45cm. Inspect for footprints, which can be around 18mm in length, and drag lines in the middle caused by the tail.

A single rat can produce 50 droppings a day. Fresh droppings have a texture like putty, whereas old droppings crumble easily.



To determine whether an area is currently infested, sweep up existing droppings and inspect again in a couple of days.

Rat urine glows blue-white under ultraviolet light.

Squeaks, scrambling, clawing, and gnawing sounds in the walls indicate rats have set up house there.

Gnawed holes up to 5cm in diameter on hard surfaces are another indicator.

Food caches in protected areas can indicate the presence of rats as the creatures can store surprisingly large amounts of food.

Inspecting the premises at night using a powerful flashlight will give you a good idea whether there is a rat problem, and the extent of it.

Rodent Control

AOS clause 6.1.21 stipulates non-chemical methods are to be used for pest and rodent control in the first instance, or alternatively methods or substances that won't compromise the authenticity of certified products.

The Standard permits mechanical rodent traps, but sticky traps – including the non-chemical varieties – are frowned upon, as there are animal welfare issues relating to the use of these pads to capture mammals.

One innovative method of dealing with rodents comes from Bundaberg business Eko Solutions (www.ekosolutions.com.au, 1800 612 212). Its EkoRodent system is hygienic with no risk of contamination, environmentally safe as no poisons are used, HACCP certified, AQIS approved and therefore suitable for use in export-registered establishments, always active, capturing up to 80 rats at a time, easy to install, low maintenance with a three-year warranty, and inexpensive to operate, using just one nine-volt battery per 5000 captures.

The system is most effective when placed in a key area of existing rodent activity, ideally where the creatures won't be

disturbed. It can be positioned inside or outside, on the ground or floor, or suspended. The smell of the natural feed placed in the Ekomille container and the structured design of the device attract the rodents – they feel safe and secure within it but as soon as they start to eat a highly sensitive mechanism is activated that instantly captures them. The rodent inhales and ingests the Ekofix solution, which is mixed and added to the container before use, and dies humanely within 10 minutes. Ekofix also preserves the carcasses for later removal. A range of accessories is available to help with this less-than-pleasant task. An external capture counter on the unit lets you know how many rats have been trapped.

Insect Control

Non-chemical sticky traps, which are available for use on flat surfaces or for hanging from the ceiling, are highly effective for dealing with bugs and insects such as cockroaches, flies and moths because they

capture a lot of friends and family overnight. "The insects that get stuck die a slow death of starvation," says Monk. "However, I don't know that there are any animal welfare issues with things like cockroaches."

Bug zappers at entry points are permitted (AOS 6.1.19), but beyond that, there's a very limited range of non-toxic substances that may be used to deal with insect infestations. Pyrethrin is permitted, but only naturally occurring and naturally derived forms are allowed, and it cannot contain additives, including the synergist Piperonyl Butoxide, which was banned from use in organics in January 2006.

Monk cautions that sometimes a product may be advertised as pyrethrin, but on closer examination you find it's actually synthetic pyrethroids, which is a family of the active ingredients, but synthetically produced and designed with greater persistence to enhance shelf life. "Organics doesn't allow the synthetic product. However, the natural one is still a nasty chemical, and the important thing is to prevent contact with food."

And natural pyrethrin should be used only as the last recourse. "Pyrethrin is a

restricted category because of the broad spectrum nature of the product. You must justify its use, and basically you can't use it as a substitute for being slack," says Monk. "So during an audit, if someone says they routinely use pyrethrin to deal with regular spider and fly infestations, the auditor would raise questions about what else is being done in terms of preventative practices and sealing the environment, rather than relying on the 'ambulance' approach."

Cold Storage

Another option – but unfortunately one not all organisations will have the luxury of using – is storing products like flour and grains in sealed containers in cold rooms. "Usually people think of cold rooms as just for fresh produce," says Monk. "Chilling the atmosphere and sealing the product enables prevention, and the temperatures can be low enough so that weevils won't become active. Obviously, organics doesn't permit the use of fungicides or pesticides to achieve this."

Carbon dioxide treatment is now quite regularly used as a treatment in grain

handling in a sealed environment to prevent weevils hatching. "The Standard allows this because carbon dioxide is a natural gas. Certainly, while the infrastructure is expensive to set up initially, once it's in place it will be cheaper in the long run."

A positive footnote to this is that some of the leading conventional grain companies are adopting organic techniques such as carbon dioxide treatment. "Some very persistent pesticides are used in the conventional grain processing industry, notably fenitrothion, which is effective for preventing weevils," says Monk. "One reason conventional flour lasts so long is the residues of this chemical present in it."

Australian food standards codes allow quite high levels of fenitrothion residue in the end product: up to five parts per million. However, some countries don't permit that sort of level. As a consequence, the conventional industry has been forced to try to reduce or even eliminate pesticide use. "This is something organics always welcomes, of course, because the fewer chemicals used in the world, the better," says Monk.



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