

## How to develop your food safety management system

Welcome to our series to assist you with the development of your food safety management system. We trust that this column will be beneficial and we look forward to your comments and questions.

### **Pest control – keeping unwanted guests out!**

In the UK, pests are the direct cause of most statutory closures of food businesses (Sprenger, 2009). Even the famous Gordon Ramsay had a pest citing in one of his prestigious London restaurants. Pests are a source of pathogens and pest control is usually considered a PRP for HACCP.

### **What are common pests?**

- ↗ Rodents – rats and mice
- ↗ Insects – flies, wasps, cockroaches, ants, moths, weevils and beetles ( SPI)
- ↗ Birds – feral pigeons, sparrows, seagulls can also be a nuisance
- ↗ Bats
- ↗ Mites
- ↗ Snakes and frogs
- ↗ Cats and Dogs

Pests require food, shelter, warmth and security – if we deny them these favourable conditions this prevents their survival. This should be the focus of our pest prevention strategy. Many companies think that pest control is what is needed but pesticides themselves pose a chemical risk to feed and pest can become a source of foreign bodies or physical hazards.

### **Pests as physical hazards**

- ↗ Legs and antennae
- ↗ Bodies – dead or alive
- ↗ Faeces / droppings
- ↗ Webbing
- ↗ Larvae
- ↗ Pupae cases
- ↗ Eggs



There are a number of reasons for keeping pests out:

- ✚ Prevent contamination by rodents and birds = food poisoning from biological contamination (*Salmonellae*)
- ✚ Prevent contamination of food product with rat urine = Weil's disease
- ✚ Prevent wastage of product
- ✚ Reduce risk of product recall as a result of foreign body contamination
- ✚ Prevent physical contamination of food = fur, body parts and faeces
- ✚ Prevent damage to equipment and premises – gnawing
- ✚ Comply with the LAW!

#### What does legislation say:

- ✚ R 918 – Regulation governing general hygiene requirements for food premises and the transport of food (Health Act)
  - *“be provided with effective means of preventing access of flies or other insects to an area where food is handled”*
  - *“effective measures taken to eliminate flies, other insects, rodents or vermin on the food premises”*
- ✚ Meat safety Act (2000)- Dept of Agriculture
  - *41.3. “chillers and freezers must be free from vermin, mould and bacterial growth”*
  - *13.5. Workers must be provided with separate fly-proof facilities in which to keep food*

Besides legal requirements, customers such as retailers require a formal pest control programme to be in place. Pest control subcontractors often use the term Integrated pest management (IPM) which is the cost-effective implementation of prevention and eradication methods based on the biology of pests, intended to ensure a pest-free operation. This programme should include the following elements:

- ✚ Early detection and identification of the pest species
- ✚ The application of environmental management such as improved hygiene, excluding pests by proofing the building
- ✚ The application of chemical and physical control undertaken with due care and regard for food safety and the environment i.e. the least toxic treatments,
- ✚ and the development of an effective monitoring strategy that will monitor the progress of any control operations.

The first strategy is to keep them out. This is done by the correct design, maintenance and proofing of buildings.

False ceilings are ideal harbourage spots so provision must be made for manholes for inspection. Boxing or ducting of pipes can become cockroach highways and should be avoided. Panels should be sealed to walls. Motor housings can be ideal nesting sites for mice. All damages such as broken tiles, broken windows, holes in walls should be mended as soon as possible. A gap greater than 6mm should be closed – a small mouse can crawl through 9mm wire mesh. Rats can jump 90cm so entry holes below this height must be sealed. Metal kick plates are the best defense on the bottom of doors – bristle strips should only be used if there is no better alternative. Drains should be sealed against rodents as should ventilation stacks.

Warm conditions are ideal for insects and rodents so keeping food rooms cool will assist in keeping them out. All ventilation opening such as opening windows must be protected with 6mm mesh preferably stainless steel mesh. Rats need free water so dripping taps, leaking roofs and puddles must be removed.




Even a perfectly proofed building will get an occasional visitor from time to time. There is a big difference between this kind of invader and a resident population. There are a number of housekeeping strategies that can prevent a visitor from becoming an infestation.

All areas should be kept scrupulously clean and tidy. Watch out for staff lockers, change rooms, dining areas – also make sure staff only eat in designated areas. Check lift shafts for food debris.

Dust accumulation should be avoided as flour dust becomes a food source for weevils. Pipes and fitting should be at least 300mm from the floor so proper cleaning can take place. Spillages should be cleaned up immediately. All food stuffs should be stored in rodent proof containers and lids always kept on. Stock rotation is essential and stock should be stored correctly. Keeping stock at least 500mm from the walls allows for effective inspection for damage and evidence of droppings. Similarly by keeping things off the floor. Rotate packaging material too as it is ideal nesting material. Pay attention to the temperature of dry storage areas. Unused equipment, packaging materials should be moved regularly to inspect for breeding sites. Pay special attention to waste. What we won't eat, rats think is 5 star cuisine. Lids on dustbins and no overflowing skips. Dustbins must be cleaned after use to avoid fly breeding. The outside areas can cause harbourage and vegetation, old equipment, scrap and rubbish must be removed. Contact the local department of health to assist with vacant neighbouring lots that may cause problems – even neighbours for the matter.

SABS 049:2001 – Code of practice for food hygiene has more requirements:

 SABS 049 –(11.2 & 11.3)

- Appoint a dedicated member of staff responsible for all pest control issues
- Air intake points – windows, airbricks, holes in walls
- Insect Light Traps (ILT's) in food processing area's
  - Not higher than 2.4m above ground
  - Not in draught
  - Not over food prep tables ( not within 3m of food prep area)
  - Catch tray to be cleaned at appropriate intervals
  - Away from natural light
  - Ultra-violet tubes shall be replaced at least every year – left on permanently
- Rodent-proof external doors (bristle strips gaps <6mm)
- Inspection to be done at least every 6 weeks
- No open bait stations in processing area, ingredient store or packaging material stores
- Inspect all incoming raw materials for signs of infestation
- Application of insect or rodenticides shall not be done during food production
- Exclude birds from all food handling and storage facilities
- Store potential food sources in pest-proof containers, above the ground (0.3m) and away from the walls (0.5m)
- All areas inside and outside the food premises shall be kept clean and sanitised
- Remove thick, overgrown foliage from building perimeter – keep grass short.



## Managing the pest control PRP

Pest control start with you and before clicking onto The Food Safety Network to contact a contractor make sure you:

- Develop a pest control Policy
- Make sure your policy addresses the correct pests
- Appoint an internal person responsible for pest control
- Make sure they are trained in pest control
- Make sure they are authorized to manage the selected service provider
- Make sure they set up a system for Corrective action with records as issues such as housekeeping, storage etc will need corrective action by supervisors and department managers.
- Give the appointed person your full support.

A co-ordinated team effort is required. Who is the team? You appoint this team – consider the following staff:

- Merchandising
- Maintenance
- Receiving
- Stores
- Cleaning
- Management
- Employees
- Night shift?

### Selecting a pest control contractor:

Most businesses rely on the expertise of a pest control company to ensure there are no infestations on their site. It is no enough to only call a pest control company in when there is an infestation – regular inspections should be carried out to ensure the complete absence of pests. It is interesting to note that the use of a pest control subcontractor does not absolve the person in charge of the premises from their responsibility to keep the site pest free. In the UK, the use of a pest control company in isolation is not a defense in the event of legal proceedings. If you decide to do it yourself, please note ALL these requirements will still need to be in place. This also applies to fumigation activities normally conducted in milling as an example.

When you select a contractor think about the following:

- Does the contractor have experience in the food industry, can they provide current references?
- Do they have appropriate insurance cover?
- Do they have sufficient trained resources – all pest control officers must be trained to the appropriate level and be registered with the Department of Agriculture
- Are all pesticides registered by the Department of Agriculture?
- Are they able to conduct a complete survey and provide a clear report of recommendations and actions required?
- Is there a clear contract covering pests treated, frequency of inspections, action when infestation is identified, type of reports, removal of dead pests, removal and destruction of toxic baits?
- Does the company conduct regular night inspections – these are considered more effective.
- Does the company provide a quality assurance system with internal audits of their service?



The service provided should conform to:

- ✚ Appropriate devices correctly secured
- ✚ Correctly located – no poison in food handling areas
- ✚ DETAILED records of application of pesticides – location, time, type
- ✚ All chemical applications to be environmentally acceptable and registered for use in SA
- ✚ Pesticides applied in accordance with SABS 10133
- ✚ Provision of training for staff to identify pests, droppings, use of sighting logs
- ✚ Building perimeter = 15m intervals
- ✚ External perimeter = 30m intervals
- ✚ Secured to floor or wall
- ✚ Tamper resistant (lockable), weatherproof
- ✚ Entry points large enough for target pest
- ✚ Service labels – legible, current
- ✚ Number on bait station to correlate to plaque above
- ✚ Inspection sticker inside
- ✚ Fresh bait – wax blocks recommended
- ✚ No liquid and grain/ loose bait
- ✚ No evidence of decomposing rodents
- ✚ No cardboard bait stations (no even in office)

#### **A special note about ILT's (insect light traps)**

- ✚ Determine capacity of unit required based on physical layout and size of facility
- ✚ Situate on a critical pathway (waste to food production)
- ✚ Do not install in direct sunlight
- ✚ Glue boards preferred in food facility ( no visible bodies)
- ✚ Shatterproof UV tubes in food prep/storage areas – Glass prevention policy
- ✚ ILT inspection sticker – service dates and UV bulbs marked with date of change
- ✚ Shown on site schematic
- ✚ Cleaning instructions specified / supplied
- ✚ Relocate if facility layout or production flow is changed
- ✚ Switched on at all times! ?



All retail audits require documentation to be in place for pest control activities. Make sure the contractor provides the following as a minimum:

- 👉 Inspection logs per devices – monthly
  - Night inspections also recorded
- 👉 DETAILED service reports
- 👉 Provision of sighting log for you to use with evidence of action
- 👉 Map or schematic of bait stations, monitors or ILT's - dated
- 👉 Corrective action reports for infestation
- 👉 Sighting log sheet
- 👉 Client action log sheet
- 👉 Trend reports
- 👉 Pesticide usage log clearly defining where pesticides were used, what time they were applied
- 👉 MSDS
- 👉 Quarterly in-depth reports
- 👉 Service schedule
- 👉 PCO registration certificates – for each and every person conducting a service on your site.

You should make sure that the contractor is accompanied during EVERY service so that the person responsible for pest control and who signs the inspection report is FULLY aware of all infestation problems, housekeeping and storage issues as well as facility issues that require additional or improved proofing.

Remember the pest control contractor should be treated as a visitor and you will need to ensure they comply with all the personnel hygiene requirements you have in place.

Should the pest control contractor be present for the audits – my opinion – NO! Pest control is your responsibility and by ensuring the person you have appointed is trained and involved in all pest control activities will result in them knowing what's in the file.

Finally, I did an audit last year where the pest control contractor's file was in order but the company had infestation problems in the facility – the reasons – housekeeping, storage practices and cleaning. The “blue” file is not a miracle cure – pest control starts with pest prevention and that starts with YOU!

