



## Directives for implementation of PRP (Pre-requisite programme) supporting HACCP

In terms of industry standard, the following requirements are to be met for all treatments performed within the specifications of Hazards Analysis Critical Point (HCCPS) and supporting Pre-requisite programmes (PRP).

A formalised preventing pest control programme shall be maintained in the facility. The facility shall maintain written procedures outlining the requirements of the programme to reduce the potential for the product contamination from pest activity of the use of materials and/or procedures designed to control pest activity. Pest control activities shall at all times be conducted in total compliance with the regulatory requirements of the agency controlling such procedures. In addition, specific programmes and procedures will include as a minimum:

1. Pesticide application made within a facility or on the grounds of a facility will be undertaken by licensed pest control operator, where such licensing provisions are required by government codes. Pesticides designated for "Restricted Use" shall only be used by trained, licensed pest control operator applicators, where a license is required by government regulations.

2. Facilities services by a contracted licensed pest control company shall maintain the following:

- A contract describing the specific service to be rendered, including material to be used, methods, precautions, and chemicals safety data information required by government regulations.
- Sample labels for all pesticides used. Samples labels shall be kept on file
- Accurate and complete services records describing current levels of pest activity and recommendation for additional efforts needed to correct conditions

allowing a potential for pest activity.

- Accurate documentation of all pesticides applications, including rodenticides, made in or around the facility. Documentation shall be maintained in accordance with government regulation and must document, at a minimum;
  - Is required Material applied
  - Target organism
  - Amount applied
  - Specific area where pesticide was applied
  - Method of application
  - Rate of application or dosage
  - Date and time treated
  - Applicator's signature
  - A copy of the current liability insurance
  - Evidence of a current applicator's license

All pesticides containers and application equipment shall be properly labelled to identify the contents. Insecticides or herbicides each require separate equipment for applications. All equipment used for pesticides application shall be properly maintained in serviceable condition.

Pesticides stored in a facility shall be stored in a locked enclosure, preferably in an outside building away from production areas. Easily understandable labelling warning contents and limiting access shall be posted on the exterior entrances to this enclosure. The storage enclosure shall be adequate in size and well ventilate. The enclosure shall contain the necessary materials to control spills or leakage and to avoid injury to personnel.

Disposal of pesticides containers and pesticides residues shall be done in a manner that meets all regulatory guidelines and must be consistent with the instructions included on the label for materials.

Pest monitoring devices and appropriate integrated pest management strategies

should be properly used to provide ongoing monitoring for pest activity and to design an effective control programme to eliminate pests and potential for pest activity.

### Rodent control:

Outside bait stations for the control of rats and mice. These baits stations should meet tamper resistance standards and shall be properly positioned, anchored in place, locked, and properly labelled in compliance with regulatory requirements. The bait stations shall be installed around the exterior perimeter of the facility. Where allowed by local law, the stations should also be installed along the fence line in accordance with industry best practice. Properly maintained mechanical rodent control devices may also be used, where allowed by government regulations.

List to bait stations shall be locked with devices supplied and recommended by the manufacturer. The use of re-useable plastic ties or other easily cut or tampered with materials shall not be used. Baits used shall be approved registered rodenticide or monitoring (non-toxic) feeding blocks.

Services conducted on the monitoring devices shall be in line with levels of rodent activity in the station. However, all stations shall be inspected and serviced no less than once per month. Each service and result of the service will be documented for each station or device and maintained on file. Internal measures shall comply with government regulations. Unless prohibited by regulatory, internal control programmes shall consist of the use of mechanical traps, extended trigger traps but should not include feeding stations of any kind.

These stations should be constructed of durable material such as hard plastic and should be kept locked and secured to keep them in place. Measures taken should be response to the level of activity present. It is recommended that the internal devices use for routine monitoring purposes be positioned at 6.5-13-meter intervals along exterior perimeter walls. Where possible, rodent control devices should be installed at each side of exterior overhead and pedestrian doors or where there is a potential for rodent entry onto the facility, rodent control devices should be installed along interior walls. The contractor or facility personnel shall inspect and clean the devices at least once a week. Maps or schematics showing the locations of the rodent control devices shall be maintained and kept current. A record of the service and cleaning of each rodent control device shall be maintained in each device. The service documentations should include the findings from the device inspections.

#### **Crawling insect control:**

A baiting procedure with bait gel has to be conducted for crawling insects, every 4 weeks, which had to include all canteens, toilets, dustbin areas and all storage, and office areas. A fogging process has to be conducted of all drains.

#### **Flying insect control:**

Automatic aerosol dispensers or electrocuting devices have to be installed for the control of flying insects. These devices have to have drip pans underneath to catch any electrocuted insects. Nets/screens should be fitted over all opening windows and opening exclude flying insects.

Electric flying insect monitors should be used as needed to identify flying insect entry into the facility. Units should be installed so that insects are not attracted from the outside the building. Units should not be placed within 3 meters of exposed product on a production or packaging line. All units should be listed on the Master Cleaning Schedule for cleanout on weekly schedule during peak season. They can be cleaned monthly during off-peak season. Installation and use must follow all local regulations. The light tubes should be changed on an annual basis and records of this maintained.

#### **Bird control:**

The building has to be sealed to exclude the entry of any birds. All opening, windows and exclusion: netting, screening, mechanical traps or avicides if legal and practical. The use of avicides (hot foot) is not permitted inside the facility.

#### **Stored products insect control:**

A full fumigation process has to be used for the control of stored products insects. Thereafter a fogging schedule every 14 day of the plant have to be introduced to stop any re-infestation.

Chemicals/insecticides/Rodenticides/Fumigants:

All remedies have to be registered with department of Agriculture, the Registrar, Act 36 of 1947 and can only be used for the

the purpose of registration as indicated on the product label. All remedies have to be biodegradable with a short residual action.

Design criteria for tamper resistant bait boxes:

#### **The bait station:**

1. Should be weather resistant and non-absorbent.
2. Should have an access panel for inspections that can be securely attached i.e. lockable.
3. Should have entrance holes which allow target animals access to baits whilst denying access to larger non-target species.
4. Should be strong enough to resist entry by large non-target species such as cats and dogs.
5. Internal design should be such as prevent bait spillage.
6. Should not be attractive to children i.e. no bright colours.
7. Proper precautionary statement must be displayed in a prominent location on the box.
8. The date of inspection of bait boxes to be clearly indicated on the inside of the lid of the box, permanent markers to be used. Name of inspector to be noted on box by visit.
9. Key to provide access to the exterior of bait station should be left on site in the care of the manager responsible for pest prevention operations.

#### **Flying insects control:**

When infestation is detected the following controls should be implemented.

##### **A. Physical control:**

1. Exclusion of flying insects is the first priority and all practical exclusion measures relevant to the factory should be in place.
2. Eliminating of breeding sites outside and inside the factory is the second priority. This internally, can usually be achieved by good inspection of potential hazard areas and high standards of detailed cleaning.
3. Physical trapping and electrical (blue light) fly killing equipment has great value if these measures are correctly sited.
4. EFK units (blue light) in particular should be sited to ensure that large insects do not "bounce" off the electrified grids and contaminated materials/equipment below.
5. EFK trays should be emptied at least weekly during the flying insects season.

#### **Cockroach control:**

The continuous use of sticky insect's detectors with attractants may be used as indicators, but not as a replacement for night inspections. These must be inspected during each routine visit by the contractor. Where there is a history of cockroach's problems, monthly night inspections should be carried out. All cockroaches can climb rough surfaces and inspections should include overhead ar-

eas as well as floor levels checks. The inside of equipment and conduits is often a harbourage site. Crevices, crack and any suspect harbourage site should be lightly flushed with pyrethrum aerosol to stimulate activity. Where infestation is found on sticky traps, night treatments must be carried out, out of production hours and weekly intervals.

#### **Control:**

- Identify type of cockroach (American or German).
- Locate harbourage and areas of activity
- Thorough cleaning and removal of food debris.
- Treat areas of harbourage after protecting open food and equipment.

When initially attacking a cockroach infestation, carry out night inspections (10pm-4am) and insecticidal treatment at weekly intervals for six weeks

After the six weeks inspection/treatments-further night inspections should be carried out at monthly intervals until no evidence of cockroaches has been found for six months.

#### **Methods/materials for rodent control:**

1. The normal methods/material used for rodent control are anti-coagulant baits which meets the requirements for the South African legislation. These baits which are to be ingested by rodent should be retained in a locked or inaccessible bait box.
2. Under no circumstances should lose bait be used in factory areas due to its potential for accidental contamination. Baits should preferably be a wax or compressed material which due to bait box design will be impossible for the rodent to remove of subject to accidental spillage.
3. Where there is any open food or packing, baits should be carefully placed to ensure that accidental food contamination is avoided. Wherever possible their baits should be placed in "dead areas" rather than open production areas etc.
4. In some cases, it may be judged necessary to restrain baits using various methods e.g. wire, magnets, screwed to floor etc. these measures have clear disadvantages which needs to be considered.
  - Wire often "push" the box from the wall/floor junction and rodent will not enter the box.
  - Inspections is more difficult in that if the box is fixed to a wall to the floor the inspector needs to go down on his knees to open the box, inspect the bait, date the internal label and close the box. This system can lead to neglect of box inspection.
  - The technician loses bait placement flexibility. Sometimes moving the bait a few inches will result in "takes" which previously did not accord.