

HYGIENE MANAGEMENT

PEST CONTROL SYSTEMS

Pest control systems

Pest includes:

- rodents
- birds
- numerous species of flying and crawling insects: cockroaches, flies, grain beetles, moths
- dogs, cats

Pest pose a major threat to the safety and suitability of food

Rodents

Norway Rats:

- Largest one
- Female has 30 to 80 babies per year
- 3-8 weeks reach sexual maturity
- 70 pellets of feces per day
- 16 ml of urine per day
- 500,000 hairs which are relaxed
- ferocious

Roof rat:

- Black 24-48 young per year
- eat less
- excrete about the same

House mice:

- Very small
- 40-48 young per year
- ests the same amount as a rat
- Doesn't need much water
- Pallet size smaller but still same volume

Flies

- House Fly: stripes on the back
- Eggs-Larva-Maggot-Dupae-Adult
- Lfe cycle 3-7 weeks
- Temperature (at least 50 to 60 °F)

Flies

THIS IS WHAT HAPPENS WHEN A FLY LANDS ON YOUR FOOD:

Flies can't eat solid food, so to soften it up they vomit on it

Then they stamp the vomit in until it's liquid, usually stamping in a few germs along with it

Then when it's good and runny they suck it all back again as they defecate on the food

They fly away, leaving you the food

Cock Roaches

- Habitat: dark, high moisture, temperature 50-90 ° F (10-32°C)
- Reproduction: 32 eggs each capsule (female can lay 1 million eggs per year)
- Life Cycle: egg-nymph, adult
- German, American and Oriental are the most common
- Diet: high CHO, protein, low fat.

The presence of pests in a food plant can result in illness to consumers through microbial contamination.

Even if the pest does not cause illness, filth such as insect parts, rodent hair and droppings can be distressing for consumer when they discover them in their food

Pest control systems

GOOD SANITATION, INSPECTION OF INCOMING MATERIALS AND GOOD MONITORING CAN MINIMIZE THE LIKELIHOOD OF INFESTATION AND THEREBY THE NEED FOR PESTICIDES



Pest control systems

In establishing an exclusive program for pest control in a food processing plant, there are a number of areas of concern. Some of these are (no limited to):

- the plant and its surroundings
- structure and layout
- plant machinery
- equipment and utensils
- housekeeping
- waste disposal
- the use of pesticides

Pest control practices and procedures:

1. Preventing access
2. Preventing breeding sites and a supply of food
3. Eradication

Pest control systems

1. Preventing access:

- Buildings should be kept in good repair and condition to prevent pest access and to eliminate potential breeding sites.
- Holes, drains, and other places where pests are likely to gain access should be kept sealed with a suitable material, such as steel wool or caulking to prevent potential entry.
- Wire mesh screens, for example, on open windows, doors and ventilators, will reduce the problem of pest entry.

1. Preventing access

- Inspections:

- ensure that drainage systems are clear and cleaned properly, that there are no blockages to prevent proper drainage or to allow for harborage or entry pests. Drain blockages may sustain pests such as cockroaches or flies.

- It's also important to ensure that drain covers are clean and in good repair

- exterior inspections should include assurances that grounds are clear of tall weeds, grasses, brush, and debris which may encourage pests to approach and potentially enter the facility.

1. Preventing access

- Inspections:

- as you walk along the outside of the plant, note whether doors and windows are closed and sealed properly, and if they have screening which is intact and of a sufficient mesh size to prevent the entry of pests.

- On occasion, it's helpful to observe from inside the plant, under subdued lighting conditions, for areas of daylight that may indicate an opening sufficient in size to allow for entry of pests. This includes windows, doors and walls bordering the outside of the plant.

1. Preventing access

- Inspections

—Inspections should also include identification of potential roosting or nesting areas for birds, a common source of human pathogen.

Look especially for bird activity near air intakes, which may draw airborne microorganisms into the plant.

Because birds on the roof will contaminate rainwater, make sure it is gutted and directed away from product handling areas, ensure also that employee entrances or any area that could cause soil to be tracked into the plant are protected.

1. Preventing access

- Blacklight electrocution device: care should be taken to ensure that this device is properly installed and routinely maintained in accordance with the manufacturer's recommendations:

- * if are installed too high off of the floor or if the light intensity levels blacklight are too weak, they will not attract flying insects.

- * if are installed too close to the processing areas they will contaminate the product

2. Preventing breeding sites and a supply of food

- To prevent a breeding site, buildings must be kept in good repair and condition, and all the different areas of the plant must be adequately ordered.

The design and layout of the processing is essential in ensuring that there is sufficient spacing to allow cleaning and sanitizing personnel to thoroughly clean and sanitize process equipment and machinery.

There should not be any “dead spaces” which may allow for the build-up or collection of food or other debris, serving as an attractant or harborage for pests.

-

2. Preventing breeding sites and a supply of food

- To prevent a supply of food, an adequate waste management must be taken. The availability of food and water encourages pest harborage and infestation.

2. Preventing breeding sites and a supply of food

WASTE MANAGEMENT

- if not properly collected, stored and disposed of, waste material may act as an attractant to rodents and other pests.
- Any spills or overflows should be cleaned up as soon as possible.
- To prevent cross-contamination of food products and to minimize the potential attraction and support of rodents and other pests, storage areas for waste materials require nearly as much attention and detail when cleaning and sanitating as do processing areas.

2. Preventing breeding sites and a supply of food

WASTE MANAGEMENT

- Waste bins, tubs and dumpsters used in the collection, holding and storage of waste materials require proper cleaning and sanitizing to minimize the potential attraction and support of food pests.
- Waste must not be allowed to accumulate in food handling, food storage, and other working areas and the adjoining environment.
- Waste stores must be kept appropriately clean

3. Eradication

Pest infestations should be dealt with immediately

Treatment with chemical, physical or biological agents should be carried out without posing a threat to the safety or suitability of food

3. Eradication

The need for chemicals should be minimal and their use must be employed with proper caution

Pest control system

The different pests control practice and procedures must be documented

The effectiveness of any pest management program must be monitored and documented

Such documentation must indicate that problems are identified and properly resolved.

Pest control system

Many processing facilities contract an outside pest control service as a component of a sanitation program.

It's important to remember:

- Is responsibility of the processing facilities to maintain and implement a program to exclude pests
- plant management must be aware at all times of which pest control practices and procedures are in place, what and how various pesticides, rodenticides and other chemicals are used, if they are appropriate, and how successful they are
- the processor and service provider should maintain open and regular communication.

Pest control system

- The pest control program must be comprehensive and should be based on the integrated pest management philosophy.
- The pest control records serve as a part of the essential documentation to ensure adequate, appropriate and effectiveness of the pest control system.

Pest control system

Some of these records are (but not be limited to):

- map of rodent stations, bait stations and insect electrocutors
- maintenance schedule for rodent stations, bait stations and insect electrocutors
- list and inventory of all pesticides used for the program, including a copy of all labels. Standard operation procedures for pesticide application.

-

Pest control system

- Copies of all reports by an outside pest control operator, listing insects and rodents found, areas of pest activity, application of any pesticides. (name of chemical and amount applied)
- reports of all in-house pest control inspections with corrective actions listed.

Typical corrective actions

- **Observation:** Gnawing marks are found at the entrance to a mushroom growing house
- **Correction:** Sanitation supervisor notifies pest control company for review of pest control methods
- **Observation:** Unused equipment has been placed within 20 ft of a mushroom growing house
- **Correction:** Sanitation supervisor notifies workers to remove equipment to proper storage area