



UNIT-6

Pest Control

Learning Outcomes

By the end of this unit the learner will be able to:

Unit 6

Pest Control

What is a Pest?

A pest is an undesirable organism at a given place and time. Pests may be plant or animal. In a commercial kitchen the pests of most concern are flies, cockroaches, stored product pests, rats and mice.

Pests are undesirable because they:

- Have the potential to spread disease.
- Cause considerable spoilage of foodstuffs.
- Damage fittings and structures which can lead to electrical fires.
- Are a nuisance and contribute to staff unrest and loss of customers.

Signs of Infestation by Rats or Mice

- Damaged food materials, packages and containers. Rats and mice do not actually eat large quantities of food, but they do carry pathogenic bacteria (Salmonella and Hepatitis A) on their bodies and urinate and defecate where they eat, contaminating food.
- Gnawed holes in woodwork and fittings. Rats teeth grow continually so they need to gnaw on hard materials to keep the teeth filed down.
- Droppings, urine stains and foot marks in spilled food.
- Characteristic odour.
- Greasy, shiny marks along the edges of a room. Rodents have poor eyesight and tend to follow regular routes close to walls.

Pest Control

1. The establishment shall have a nominated person to manage pest control activities and/or deal with appointed expert contractor.
2. Pest management programmes shall be documented and shall identify target pests, and address plans, methods, schedules, control procedures and, where necessary, training requirements.
3. Programmes shall include a list of chemicals which are approved for use in specified areas of the establishment to be get listed in agreement.
4. Food establishment, including equipment and building shall be kept in good repair to prevent pest access and to eliminate potential breeding sites. Holes, drains and other places where pests are likely to gain access shall be kept in sealed condition or fitted with mesh / grills / claddings or any other suitable means as required and animals, birds and pets shall not be allowed to enter into the food establishment areas/ premises.
5. Food materials shall be stored in pest-proof containers stacked above the ground and away

from walls.

6. Pest infestations shall be dealt with immediately and without adversely affecting the food safety or suitability. Treatment with permissible chemical, physical or biological agents, within the appropriate limits, shall be carried out without posing a threat to the safety or suitability of food. Records of pesticides / insecticides used along with dates and frequency shall be maintained.
7. Animals, birds and pets shall not be allowed to enter into the food establishment areas/ premises.
8. In order to control the settlement of pests in the surroundings (i.e. not to provide them place of refuge and feed resources) it is necessary to maintain a non-attractive environment which includes:
 - Isolated storage of unutilised materials, pallets and machines, without contact with the walls and buildings.
 - Design and maintenance of external spaces, including:
 - Elimination of holes and spaces in waste land with high vegetation.
 - Regular cutting of grass lawns
 - The elimination of stagnant water.
 - The absence of rags, papers, plastic films and other detritus abandoned on the ground.
9. Tidying and cleaning of technical buildings (machine shop, boiler room, refrigeration rooms, and electrical cabinets) to avoid rodent settlement.
10. Rigorous management of waste containers, which include:
 - Frequent cleaning so as not to attract insects.
 - Storage in a clean and easily available washing area equipped with a source of water and floor drainage system for waste water.
 - Keeping them closed (to prevent use as a feed source by all types of pests).
 - Not filling them in to excess to avoid overflowing and dropping of food waste on the ground.
 - A waterproof design and easy to clean and disinfect.
 - Frequent removal of waste from production area.

The Major Pest includes – (*Informative purpose*)

11. Cockroaches
12. Rodents (mice, rats, squirrels etc.)
13. Flies

14. Stored product pests (Flour beetle, sawtooth grain beetle, cigarette beetle, Indian meal moth etc.)

1. Cockroaches

Cockroaches are active mostly at night. They prefer places that are warm (26°C or higher) and moist (55% humidity or higher, which is another reason to keep relative humidity at or below 50%). Cockroaches like to hide in cracks and crevices and they frequently take advantage of “free rides” in delivery boxes, bags and personal items. Cockroaches leave coarse pepper-like fecal droppings, as well as fecal smears that dry on surfaces. Other signs of cockroach activity are the presence of egg cases under and inside drawers, cabinets, equipment and other hiding areas.

2. Critical Areas for Cockroaches

Cockroaches are attracted to spilled food and water or beverages. Equipment, such as packaging machines need to be checked carefully. Inspect and clean all food preparation equipment and surfaces. Remove scraps from drains.

3. Chemical Control of Cockroaches

Crack and crevice treatment and spot treatment

- Target use of insecticides to reduce amount used
- Avoid contaminating food, preparation surfaces and equipment
- Apply insecticides after business hours

4. Rodents

Rodents mainly include rats and mice (usually mice are the more common problem). They damage/contaminate food and property. The rodents can spread diseases through their feces and urine or by contact with surfaces. Rodents nest outdoors in areas hidden by tall grass, landscaping, “clutter” or down in sewers.

5. Control of Rodents

i. Rodents Traps

Mechanical traps are the best choice for indoor rodent control. Lethal traps include sticky traps and regular snap traps. Mechanical rodent traps include “live traps”. Traps must be checked daily and rodents or their carcasses removed as soon as possible.

ii. Rodent Baiting

Poison baits can be used only outdoors. Keep track of rodent feeding activity on these baits. Placement is critical. Rodents prefer to travel along walls, so place the stations where rodents are likely to find them. One important point to remember: if you bait in public areas (i.e., accessible to people or animals), then you must place the baits in a secure bait station

6. Flies

“Filth flies” are the most common fly problems associated with food-handling facilities. They include house flies and the green, blue or coppery colored blow flies commonly seen around garbage cans.

Fruit flies are found near damaged or discarded fruits and vegetables. Drain flies breed in floor/sink drain, as well as the drip lines for air conditioners, freezers and ice-makers. Fungus gnats can also be found where indoor plants are overwatered.

Sanitation is very important to fly control and prevention. Keep food preparation areas clean and dry.

Control of Flies

Lights traps are helpful indoors and outdoors to trap flies. They should be mounted preferably 4-6 feet off the ground, but out of the way of employee activities. Indoors, place these traps where they will *not* be visible from outside. Otherwise, they might attract flies to the building. Bulbs should be replaced yearly and the replacement date noted on the trap.

Stored Product Pest

Important pests in food service are those that attack stored foods. The Indian meal moth (a small moth with coppery-colored wings) is probably the most common stored products pest. Flour and grain beetles are other important stored product pests. All of these insects attack a wide variety of food products.

Further Reading: