## UNIT – 5: Pest control

Pest Control refers to the regulation or management of a species defined as a pest, usually because it is perceived to be detrimental to a person's health or infrastructure.

Pest control is important because pests cause disease and discomfort. The housekeeping department plays an important role in detecting the presence of pests in or around the establishment and organizing their control or eradication. However, the services of pest control i.e. spraying of pesticides etc is contracted to a specialized pest control agency under the supervision of housekeeper.

**What is pest?**

A pest is any organism that

- Competes with humans, domestic animals, etc for food or water.
- Injures human, domestic animals, structures.
- Transmits disease to humans, domestic animals etc.
- Annoys humans and domestic animals.

**Types of pest**

- Insects(e.g.-cockroaches, termites, beetles, fleas)
- Arthropods(eight legged organisms)(e.g.- mites, ticks, spiders)
- Microbial organisms(e.g.- bacteria)
- Weeds (unwanted plants)
- Molluscs(snails, slugs)
- Vertebrates (egg- mice& other rodents)

**Categories of Pest**

- ***Continuous pest*** – nearly always present and require regular control.
- ***Sporadic/ migratory/ cyclic pest*** – require control occasionally or intermittently
- ***Potential pests*** – do not require control under normal conditions but may require control in certain circumstances.

To identify & control pests, one needs to know the following details-

- The physical features of pests
- Characteristics of damage they cause
- Their development cycle and biology
- The goals of the pest management

program. Pest control goal –

- Prevention: keeping a pest from becoming a problem.
- Suppression: reducing pest numbers or damage to an acceptable level.
- Eradication: destroying an entire pest population.

**Threshold levels –**

Threshold are the levels of pest population beyond which you should take pest- control action if you want to prevent the pest in an area from causing unacceptable injury or harm.

IHM NOTES
DOCUMENT CENTER

## COMMON PESTS AND THEIR CONTROL-

### BED BUGS

These are tiny parasitic creatures that feed on the blood of humans & other animals. Symptoms of presence – Itching or rashes on the person sleeping on the bed.

Blood stain on sheets or fluid stain on walls / furniture. Unpleasant odour

To eradicate an infestation,

- It is necessary to treat the premises thoroughly by fumigation.
- Pouring boiling water into crevices is a temporary solution to get rid of bed bugs.
- A thick application of kerosene oil emulsion is also effective against bed bugs.

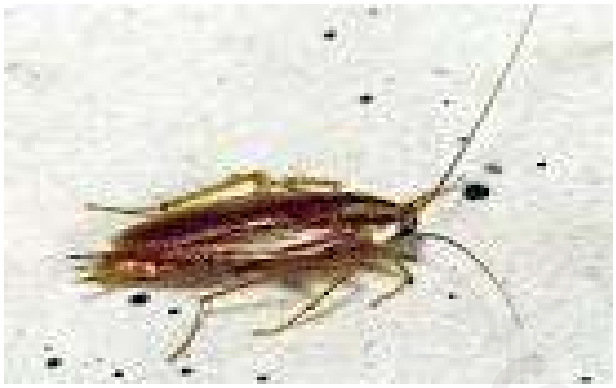
### SILVERFISH

These are silvery grey insects that look like minutes fish without fins. They are nocturnal insect s primarily found in moist areas & feed on cellulosic materials such as paper & cellulosic fabrics such as cotton.

**Eradication:**

- Keeping moist areas clean & treating those with insecticide will help to get rid of these pests.
- Pyrethrum & sodium fluoride crystals are effective against silverfish.

**COCKROACHES:** These are several species of nocturnal insects that spends most of the day hiding in cracks, around drains, or in other dark, secluded crevices. Two common species of cockroach are the German & the oriental. T



**Eradication**:

Cockroaches are difficult pests to eradicate.

- Proprietary cockroach- killer preparations may be used in the infested areas.
- Pest- control experts need to be called if the infestation persists.
- Maintaining proper hygiene & sanitation.

**MOSQUITOES:**

These transmit diseases such as malaria, filarial, & yellow fever. Eradication:

- Repair & fill all pits & puddle.
- Cover drains & put pesticides into these to prevent larvae from thriving there & growing into adult mosquitoes.
- Fine gauze on windows prevents entry of mosquitoes.
- An effective, eco friendly method for the control of mosquitoes is to place pots of the water around the property for a week or two. During this time, mosquitoes lay their eggs in the water. Before the eggs can develop however, this water is discarded, killing the larvae.

**MICE AND RATS:**

Rats and mice both carry disease germs (such as plague &typhoid) & may cause food poisoning, infection, jaundice etc.

**Eradication:**

- Poisoning
- Trapping
- Fumigating
- To eliminate their food supply & shelter
- Rat-proof buildings
- Ultrasonic devices

**FLIES:**

These filthy insects are dangerous to health as they contaminate food, causing diseases such as typhoid, cholera, dysentery, and so on. They carry the disease germs on their legs and in their saliva. These are transferred to the food on which they sit.

**Eradication:**

- The first essential step is to destroy all possible breeding grounds early in the year before egg-laying begins.
- Burn all garbage, keep dustbins covered, & maintain a good standard of cleanliness for the surroundings.
- Three teaspoons of formalin + 1 pint of milk/water + sugar should be placed in saucers in susceptible areas to trap & kill flies.
- Aerosol fly-killer sprays are also effective.

**ANTS:** these insects generally invade in large numbers when they come in search of food, especially sweet substances. They enter through crevices and travel along a definite track in a procession.

**Eradication**:

- The ants can be systematically trapped at the point where they enter an establishment.
- The vulnerable areas must be emptied of food, thoroughly cleaned,& borax – which repels them- spread over the shelves until the ants cease to come & eventually go to find food else where
- If the nest is located, it can be destroyed by placing 2 tablespoonfuls of carbon disulphide at the entrance.

**TERMITES:**

These are social insects, like ants. They are also called white ants because of their appearance.

**Eradication:**

- Soil should be treated before construction of buildings with an appropriate termite killer fluid.
- During construction wood should not be allowed to come within 6 inches of the ground.
- Coat any untreated and exposed wood with an appropriate insecticides
- Seal all cracks and crevices.
- Increase of infestations lightly puncture kick out holes and inject an appropriate insecticide into the hole
- Saturate infested furniture with Orth dichlorobenzene.

IHM NOTES

- Wax and varnish all wood and coat with linseed oil to cover the pores.

**BEETELS:**

Carpet beetles attack furs, carpets, all kinds of woolen textiles. They have emerged as a major pest to hotel textiles. They flourish in situations where they can remain undisturbed-for example; beneath carpets, around skirting boards, & in wardrobes. They usually targets animal's wool, leather & the damage often takes the form of irregular holes in these.

**Eradication:**

- Frequent & thorough vacuum cleaning of fluff & dust.
- Furniture beetles/woodworm- this beetle makes its home in crevices & cracks of furniture made of unpolished wood. The first sign of infestation is usually small piles of yellowish bore dust found beneath the furniture.
- Unpolished wood should be treated with commercial anti wood worm preservative, polish, varnish, or lacquer to prevent the beetles from laying eggs in furniture.
- To kill woodworm, the crevices & exit holes should be sprayed with a proprietary woodworm killer fluid.

- **MOTHS:** There are two types: Clothes moth & moths attacking foodstuff.

Cloth moth

- Clothes moth attacks wool, fur, leather etc and hides in light or with activity.
- Wash clothes in hot water or dry-clean.
- Seal in airtight bags.
- Place under sunlight.

Food Moth: Thorough cleaning of food area with detergent and hot water.

- Vacuuming and removing any larvae or cocoons.
- Rinsing are with 50-50 solution of vinegar and water to kill larvae and eggs.
- Throw away infested food and wash and dry the jars.

**FUNGI:** Fungi can cause considerable structural damage to a property. It is more likely to be found in kitchen, bathrooms, & roofs, windows frames & skills, door & door frames & attack timber with a moisture content of more than 30 percent.

**METHODS OF PEST CONTROL:**

**1) Natural controls –**

- Climate –weather conditions (temperature, day length, & humidity) affect pest activity. Pests may be killed or suppressed by main, freezing temperature, drought, or other adverse weather conditions.
- Natural enemies- birds, reptiles, amphibians, fish, & mammals feed on some pests & help controls their numbers.
- Geographic barriers- features such as mountains large bodies of water restrict the spread of many pests.
- Foods & water supply –pest population can thrive only as long as their food & water supply lasts.
- Shelter- over wintering sites& places to hide from predators are important to the survival of some pests.

**2) Applied controls in a hotel-**

- Mechanical/physical control- traps, screens, barriers, fences, nets, radiation & electricity can sometimes be used to prevent the spread of pest into an area.

- Sanitation- good sanitation, improving cleanliness, eliminating pest harbourage, increasing the frequency of garbage pick-ups & proper design of food-handling area help to prevent pest infestations.

- Chemical control- pesticides are chemical used to destroy the pests, control their activity, or prevent them from causing damage.

**ROLE OF HOUSEKEEPING - INTEGRATED PEST MANAGEMENT**

Integrated pest management is the combination of appropriate pest control tactics into single plan to reduce pests and their damage to an acceptable level with least disruption to other living organisms and non organic surroundings at the treatment site.

To develop an integrated pest management system, one must

- Identify the pest or pests to be dealt with
- Determine the pest control goals
- Know what control tactics are available
- Evaluate the benefits and risks of each tactic
- Choose most effective strategy
- Use each tactic in the strategy correctly
- Observe local, state, and union regulations that may apply to the situation