

# A Study on Different Types of Pests Found in Hotels and Preventive Measures Taken to Eradicate Pests in Hotels

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**Abstract:** *The presence of pests like rodents, cockroaches, bed bugs, and flies can lead to health and hygiene concerns, tarnishing a hotel's image. To combat these issues, a proactive approach to pest management is essential. Prevention measures include maintaining cleanliness, sealing entry points, and training staff on hygiene practices. Regular inspections and monitoring are crucial to detect early signs of infestations. Integrated pest management (IPM) techniques, such as the use of traps, baits, and environmentally friendly pesticides, are effective for controlling pests while minimizing harm to humans and the environment. Furthermore, educating both staff and guests about their roles in pest prevention and reporting is vital. By implementing a comprehensive pest management plan, hotels can uphold their reputation, ensure guest satisfaction, and maintain a pest-free environment.*

**Keywords:** Pests, preventive measures, pest-free environment, waste management.

## I. INTRODUCTION

Pests pose a significant threat to the food industry due to their harmful nature. They can cause damage to raw materials, taint food, spread diseases, transmit infections, contaminate food, and start electrical fires, which makes pest control essential in the food industry as it may lead to major issues and may even cause the hotel or restaurant its license. Devastation caused by pests in hotels can have severe consequences for both the establishment's reputation and the well-being of its guests. Various types of pests, such as rats, cockroaches, beetles, flies, birds, and moths, can pose a risk to food safety. Housekeeping serves not only to make things look nice but also to protect everyone's health and safety and prevent property from deteriorating and losing value as it is the major selling point of any hotel. Mechanical and physical controls, such as traps, screens, barriers, fences, nets, radiation, and electricity, can sometimes be used to prevent the spread of pests into an area by directly killing them or making their environment hostile. Sanitation, including good cleanliness, eliminating pest harborage, increasing the frequency of garbage pick-ups, and proper design of food-handling areas, can help prevent pest infestations. Maintaining good sanitation practices is crucial to protect the site from potential threats and consider the type of pests, areas, and unique factors when developing a sanitation schedule. The sanitation schedule prepared should be followed accordingly and should be noted down with details and reminders for the next schedule.

### 1.1 Objective

- To understand the dangers of pest and their infestations, explore the types of pests which affect hotels ways to prevent them, and the importance of pest control.

## II. RESEARCH METHODOLOGY

This research paper is based on secondary data. The data is collected from research journals, Magazines and internet websites.

## III. LITERATURE REVIEW

Pest insects, such as insects and plant diseases, can inflict substantial damage and economic losses, endangering food security and ecosystem services. As a result, it is essential to implement effective pest management strategies to

minimize the risk of damage. The use of toxic chemicals in pest control can cause environmental hazards and the development of insect resistance to these chemicals, making it necessary to adopt more sustainable and eco-friendly methods. This study evaluates the application of three dynamic control measures, including green insecticide, mating disruption, and the removal of infected plants, to control pest insects. A model was constructed to describe the interaction between plants and insects and the spread of the pathogen. The aim of the study is to identify optimal control measures that maximize healthy plant density while minimizing control efforts and costs. The simulation results show that all strategies are effective in controlling the insects, but a cost-effectiveness analysis indicates that a combination of two measures, green insecticide, and plant removal, is the most cost-effective, followed by a strategy that employs all control measures. The best strategy can decrease potential losses from 65.36% to 6.12%.

Achieving zero starvation, achieving food security, improving nutrition quality, and promoting environmentally friendly agriculture are the objectives of the second Sustainable Development Goal. Sustainability can be attained through preserving natural habitats, gradually increasing land and soil quality, and strengthening resilience to climate change, erratic weather, and other natural disasters. Pest and disease attacks are a problem while maintaining high-yield crops. Maintaining the equilibrium of ecosystems should also involve controlling diseases and pests. Pesticides that are widely used for plant protection include dangers to organisms that are not their intended targets in addition to being efficient at managing pests and illnesses. Developing novel formulations of existing chemicals and increasing their bioactivity are two innovative ways to reduce the amount of active components sprayed into pesticides and lessen their adverse effects.

Pest control, which maintains nuisance organisms below economic thresholds, is a complex ecological process that is often mediated by biodiversity. The agricultural intensification results in widespread losses of biodiversity, which has significant implications for pest control. This article reviews how the biodiversity at several levels of biological organization (e.g., crop genetic, trait, and species diversity, predator diversity, and multi-trophic interactions including ecological network interactions) and distinct spatial scales (e.g., crop field, non-crop habitats, and landscape heterogeneity) affects biological pest control. Increases in biodiversity resulting from ecological or organic farming techniques can promote pest control within agricultural landscapes, but the effects of increased diversity are highly variable.

Agricultural pests can cause severe damage, as evidenced by the global losses in arable crops, which account for approximately 10-15% of the total yield value. This chapter provides a comprehensive overview of the various types of economically significant agricultural pests, as well as various pest control measures, including the integrated pest management approach, and a detailed discussion of biological control measures. Additionally, the chapter covers the use of microorganisms and macro organisms for the biological protection of crops, such as the use of bacteria, yeast, nematodes, and predatory insects.

Passive physical control measures have long-lasting effects but may control, along with chemical, biological, and cultural methods, is a crucial approach for protecting crops from insects. This chapter will focus on physical control techniques. Physical control methods for crop protection involve limiting pest access to the crop/commodity, inducing behavioral changes, or causing direct pest damage/death. The primary action can have a direct impact, such as when insects are killed immediately by mechanical shock. Alternatively, the desired effect may be achieved through stress responses. The various physical control methods used against crop pests share some common characteristics that require periodic renewal, such as trap replacement or maintenance, e.g., physical barriers and mulching. Present physical control methods are more labour-intensive and often time-consuming.

A major crop loss source and a major threat to food security, insects represent a persistent menace to world agriculture. Concerns about pesticide resistance, environmental damage, and human health have been raised by conventional pest management methods, which frequently rely on chemical pesticides. Researchers have been looking at creative and sustainable solutions to these problems. (RNAi), an effective biological instrument that provides highly focused and environmentally acceptable pest control solutions. strategies for controlling pest insects. RNA interference is one of the most promising new techniques.

The significance of pest management in the hotel business is illustrated in the hotel's pest control program. The fact that most green pest control is done in the background and won't interfere with visitors' stays is a crucial component. An all-encompassing method of controlling pests, integrated pest management (IPM) places a strong emphasis on source

reduction and takes into. A wide variety of pest control techniques should be used in successful pest management: crop rotation, insect scouting, resistant cultivars, treated seeds, and pesticides. For anyone interested in additional in-depth advice on strawberry production and pest management, the Appendices include a list of industry representatives, control advisers, and university research and extension staff. You can operate as a contractor or as a business in the pest industry if you hold a pest management license.

#### **Pests and the dangers of their infestation-**

External infestations can cause significant nuisance and health concerns when organisms primarily inhabit the surface of a host's body or the surrounding environment, sometimes even penetrating internally. These infestations can be caused by various pests, including mites, ticks, head lice, and bed bugs. Effectively managing and eradicating such infestations often requires specialized pest control services tailored to the specific type of pest in order to prevent further issues. Let's explore these different categories of pests in more detail:

**Squirrels** are known to nest in attics and walls, causing structural damage and potentially leading to electrical issues that pose a fire hazard.

**Bats** can roost in rooms and may carry diseases like rabies, requiring proper exclusion and removal techniques to address bat infestations safely.

**Bird** species are known to cause problems when they infest residential or commercial spaces. These bird pests include pigeons, seagulls, and other species, depending on the geographic location and habitat. Pigeons are notorious for roosting in buildings and causing unsightly droppings that can damage structures and spread disease. Seagulls are also problematic, particularly in coastal areas, where they tend to scavenge for food and nest on rooftops. Other bird species, such as sparrows or starlings, can become pests as well, depending on the location and habitat. Managing bird infestations may require the use of deterrents and humane removal methods.

**Cockroaches** are common household pests that can be challenging to control. They are known for their ability to adapt and survive in a wide range of environments. To effectively control cockroaches, it's important to implement a combination of preventive and treatment measures. Here are some common pest control measures for cockroaches

**Other pests** Along with the major categories previously mentioned, there are also occasional pests that may infest houses or rooms. These may include reptiles like lizards or amphibians, as well as less common insects or arachnids. To effectively manage these infestations, one must have knowledge of the specific species and their habits.

To manage external infestations caused by these pests effectively, it is crucial to use a combination of measures such as prevention, pest identification, and targeted control. In certain situations, consulting with professional pest control services that specialize in eradicating specific types of infestations may be necessary. Prevention is a vital aspect of pest management to prevent infestations from recurring, which may involve sealing entry points, maintaining cleanliness, and implementing habitat modifications to discourage pests from settling in and around your home or living space.

#### **Types of pests and their preventions-**

**Blood-sucking pest-** mosquitoes and bed bugs feed on the blood of warm-blooded animals like pets and humans they're often found in mattresses couches and pillows.

Prevention-

Remove all standing water from your house. Water puddles, half-empty bottles, jars, and other containers should be emptied or kept sealed.

Remove tree stumps on your property. These usually are the food for survival and breeding ground for mosquitoes.

Lakes or ponds present nearby should be kept transparent. Mosquitoes love dirty water!

Clean your gutters regularly.

Fixing leaky pipes in and around the room and in the room as well.

Properly seal all areas of each and every room and even open areas.

Immediately clean food and drink spillage.

**Property damaging pest-** The problem with ants is that they form underground colonies, with the ant queen being the root of the issue. Finding her can be challenging. Ants play a crucial role in the ecosystem, so controlling their population is vital. Hosting an ant invasion can be catastrophic, especially for carpenter ants. Termites are the most

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dangerous pest, as they eat and work 24/7, making them incredibly destructive. They favor dark, moist areas around or under your home's foundation. If you have a suspended-floor home, termites can live in the timber and cause significant structural damage.

#### **Prevention-**

To prevent termite infestations, eliminate standing water and remove moisture from your home. Termites thrive in humid environments.

To keep your home safe from termites, repair leaking faucets and pipes, replace broken tiles, shingles, and soffits, divert your gutters and downspouts away from your house, and inspect your home's foundation regularly for signs of termites, such as mud tubes, sawdust, and hollow wood.

In addition, regularly monitor the wood around your house, including your furniture, and get a professional inspection at least once a year. Also, keep kindling and firewood at least 50-60 feet away from your house.

**Food-polluting pests-** Cockroaches are notorious for their ability to thrive in dark, moist environments and their insatiable appetite for various materials, such as fabric, paper, and stored food. They are also known to carry and spread numerous diseases, including 33 types of bacteria, seven types of human pathogens, and six different types of parasitic worms.

#### **Prevention-**

Seal as many cracks and nooks as possible, which you can see.

Implement preventive traps to keep pests away.

Keep your entire house clean, including all bedrooms, living rooms, bathrooms, attics, basements, and any other areas.

Screen all drains pipes and sewer vents with mesh.

Store garbage containers far away from entry points around your house.

Avoid leaving dirty dishes overnight.

Trim tall shrubs that are close to your house.

Ensure proper ventilation in your house.

Pest control measures prevent many things in House-keeping:

**Pest control measures play a crucial role in housekeeping and maintaining a clean, healthy, and safe living environment. Here are the key points highlighting their importance:**

**Preventing Health Risks:** The implementation of effective pest control measures helps to curtail the propagation of viruses and allergens that pests can transmit. This minimizes the likelihood of illnesses and allergic reactions among the inhabitants.

**Protecting Property:** Pest control measures are implemented to protect properties and structures from damage caused by pests like rodents, termites, and birds. By preventing structural damage, homeowners can avoid costly repairs.

**Preserving Food Safety:** Maintaining pest control is crucial in kitchen and food storage areas to prevent contamination and guarantee food safety. The presence of rodents and insects can result in health risks due to food contamination.

**Ensuring Comfort:** A pest-free home is one that is more agreeable and pleasant to reside in. It reduces the stress and anxiety that can come with pest invasions.

**Maintaining Cleanliness:** Pest control advocates for maintaining a clean and hygienic living and working environment by recommending regular cleaning and sealing of entry points to prevent pest infestations.

**Preventing Infestations:** To prevent pest infestations, homeowners can take proactive measures, such as sealing cracks and crevices and eliminating breeding sites, which helps save time and money.

**Environmental Responsibility:** Minimizing the impact on the environment and non-target species can be achieved through the use of responsible and targeted pest control methods.

**Professional Expertise:** In certain situations, professional pest control services are required to effectively deal with infestations. These experts possess specialized knowledge and equipment to manage pests in a safe and effective manner.

Integrating pest control practices into daily housekeeping is vital for maintaining a clean, safe, and pest-free home. Regular inspections, proper sanitation, and preventive measures are crucial in minimizing the risk of infestations. By

emphasizing pest control, homeowners can preserve their property and ensure a healthier, more comfortable living situation while safeguarding their well-being.

#### **IV. CONCLUSION**

Pests can be grouped into arthropods, mammals, and birds, each requiring specific control measures. Arthropods include insects and arachnids, while mammals comprise rodents like mice and rats, as well as squirrels and bats. Birds, such as pigeons and seagulls, can also cause problems. To prevent pest infestations, it is important to maintain cleanliness and seal entry points. When an infestation occurs, tailor control measures to the specific type of pest, and if necessary, consult with professional pest control services for specialized solutions. Vigilance and timely action are crucial to maintaining a healthy pest-free living environment.

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