

# Bed Bug Control

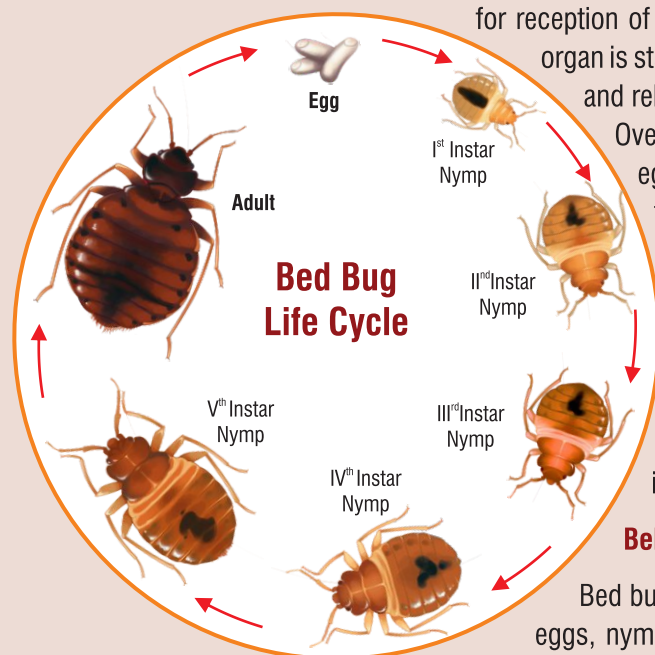
## Bed Bug Control

The common bed bug (*Cimex lectularius*) is one of the emerging pest in the poultry farms. Bed bugs have recently regained worldwide attention because of their resurgence into dwellings shared by humans, such as homes, hotels, apartments, homeless shelters, buses, trains and also in many of the poultry facilities.

Adult bed bugs are small (5mm long by 3mm wide), wing less, oval insects that vary in colour from yellowish to dark brown and appear dark red if recently fed. The body is flattened dorso-ventrally and clearly divided into head, thorax and abdomen. Bed bugs are principally nocturnal and hideaway in cracks and crevices during the day. They feed exclusively on blood.

## Life Cycle

The male can be distinguished from the female by examination of the abdomen. The male abdomen is narrower, slightly pointed and asymmetrical in outline. The female abdomen is rounded and symmetrical in outline. Bed bugs have a unique method of mating called traumatic insemination, because the female's body has no natural opening for reception of sperm, the male's reproductive organ is stabbed through the female's body wall and releases sperm into the female's body cavity.

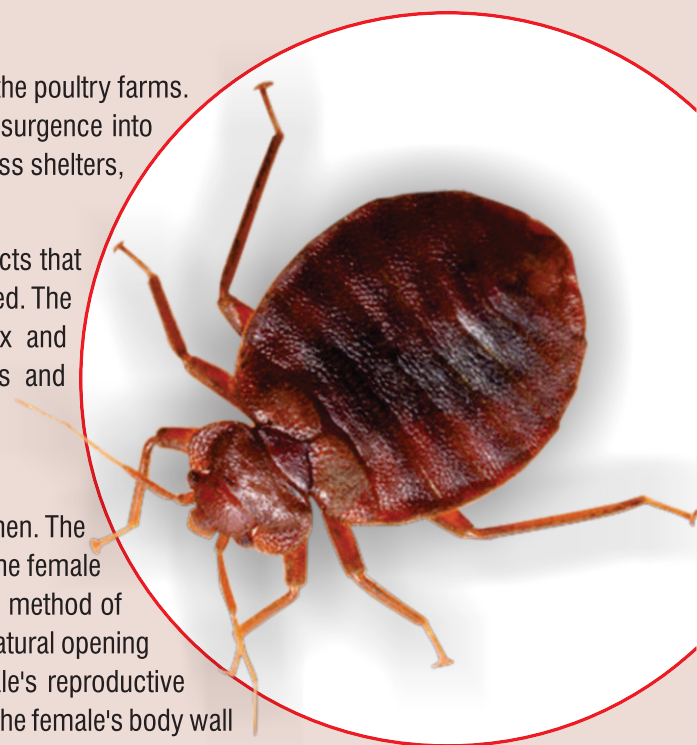


Over the next several hours, the sperm migrate to the ovaries and fertilize the eggs. Female bedbugs glue eggs in the cracks and crevices of walls and furniture. Each female may lay upto 300 eggs over her lifetime depending on environmental conditions and access to blood meals. Eggs hatch after about 10 days and the first instar nymph emerges. There are 5 nymphal instars and each requires a blood meal to facilitate a moult to the next stage. Nymphs can survive for 4 months without a blood meal and adults can survive for over a year without feeding. The average time for completion of the lifecycle is 10 weeks but development is strongly influenced by temperature, humidity, host availability and habitat.

## Behavior of Bed bugs in Poultry Farms

Bed bugs are very efficient at hitchhiking and can arrive at poultry facilities as eggs, nymphs, or adults attached to boxes, clothing, cages, slats, litter removal equipment, or other equipments brought from infested poultry facilities. One impregnated female bed bug can produce a well developed infestation in the breeder house within a few months of time. Due to the large number of eggs that a female can produce under the right conditions and with access to a host, bed bug's population can eventually double every 16 days. The young and adults of both sexes feed exclusively on blood.

Heavy infestations of bed bugs in chicken houses may lead to excessive feather loss, cloacal irritation, lesions on the breasts and legs, and possibly anemia in severe cases. This could lead to fewer egg numbers, lower fertility, and/or decreased hatchability. Feed intake and feed per dozen hatching eggs may also be affected. Bed bugs are not known to spread disease, but their bites can sometimes cause painful reactions in sensitive individuals working in the infested farms.



# Bug Remover

## Some of commonly used bed bug control methods and its limitations

- Insecticides based are commonly used products, but they no longer work well because of resistance, and insecticide applications must reach harborage locations (not on the birds), which is not always possible.
- Diatomaceous earth has also been used as an alternative to chemical insecticides with varying degrees of success that seem to be somewhat weather-dependent (applying it when the humidity is low works better than when humidity is high).
- Heat treatment can be used to kill bed bugs when birds are absent from the facility. Sustained heating of the structure to 130°F for a few hours should kill the bed bugs and their eggs.



Bed bugs are very difficult to control, especially with birds on the farm. The pattern and severity of infestation of bed bugs varies from farm to farm. So it is always advisable to contact Nutricon's pest management professionals to determine the level of infestation and we will guide and help you with the effective control programme to overcome the bed bug nuisance.

Nutricon Research proudly presents novel organic herbal based product called **Bug Remover** to overcome Bed bugs problem effectively.

**Bug Remover** has a special formulation includes garlic extract with other natural oils in organic carriers. **Bug Remover** removes immature and matured parasites effectively and also breaks through the protective triple outer layers (protein/lipid/chitin) of eggs of bed bugs.



## Recommendation

One liter of **Bug Remover** or is sufficient for 1000 to 2000 breeders or upto 5000 layers, but the dosage varies depending upon the severity of infestation.

## Application

Mix thoroughly 1 liter of **Bug Remover** with 100 liters of water and spray on the areas especially cracks and crevices /where there is infestation of bed bugs.

**Packing  
5 Liters.**



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