

Laboratory Evaluation of *Bacillus subtilis* Bioactivity on *Musca domestica* (Linn) (Diptera: Muscidae) Larvae from Poultry Farms in South Western Nigeria

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Abstract : Muscid flies are known to be vectors of disease agents and species that annoy humans and domesticated animals. An example of these flies is *Musca domestica* (house fly) whose adult and immature stages occur in a variety of filthy organic substances including household garbage and animal manures. They contribute to microbial contamination of foods. It is therefore imperative to control these flies as a result of their role in Public health. The second and third instars of *Musca domestica* (Linn) were infected with varying cell loads of *Bacillus subtilis* in vitro for a period of 48 hours to evaluate its larvicidal activities. Mortality of the larvae increased with incubation period after treatment with the varying cell loads. Investigation revealed that the second instars larvae were more susceptible to treatment than the third instars treatments. Values obtained from the third instar group were significantly different ($P \leq 0.05$) from those obtained from the second instars group in all the treatments. Lethal concentration (LC50) at 24 hours for 2nd instars was 2.35 while LC50 at 48 hours was 4.31. This study revealed that *Bacillus subtilis* possess good larvicidal potential for use in the control of *Musca domestica* in poultry farms.

Keywords : *Bacillus subtilis*, *Musca domestica*, larvicidal activities, poultry farms

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