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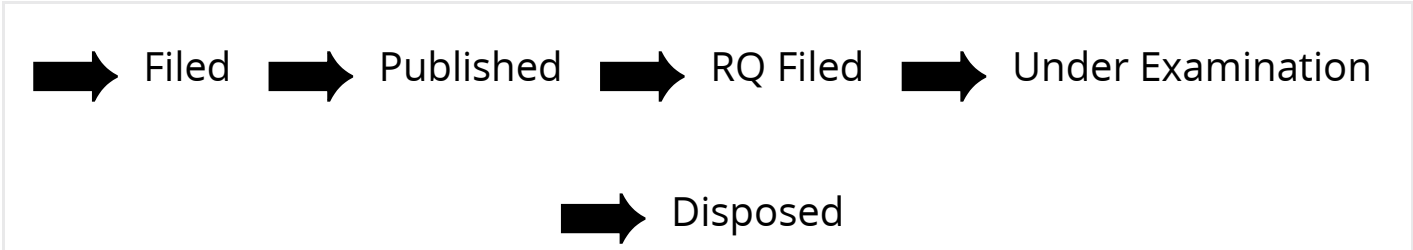

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(57) Abstract :
The present invention relates to Nomuraea rileyi exhibited notable bioefficacy against Helicoverpa armigera (Hubner) larvae, leading to alterations in protein profile in pest management. The Helicoverpaarmigera is one of the most serious polyphagous pests of many economically important crops. Nomuraea rileyi, an effective entomopathogenic fungus for controlling H. armigera, offers several advantages over other synthetic insecticides. In this study, an N. rileyi LC50 concentration of 1.97×106 spores/ml is applied to the 4th larval instar of H. armigera to investigate its impact on the total protein and protease activity of the larval body homogenate. Additionally, qualitative analysis of proteins in healthy developmental stages of H. armigera larvae and in N. rileyi-treated larvae is conducted using SDS-PAGE. The present investigation reported differences in SDS-protein bands between the control untreated and treated groups. SDS-PAGE analysis of the total body homogenate demonstrated that some proteins are down regulated upon treatment with N. rileyi. Quantitative analysis of total protein content and proteolytic activity revealed a significant decrease ($p<0.05$) in the total protein content of larval bodies and a significant increase ($p<0.05$) in protease activity in N. rileyi-treated larvae compared to the control larvae. The data from this study help in understanding how N. rileyi can effectively control H. armigera.

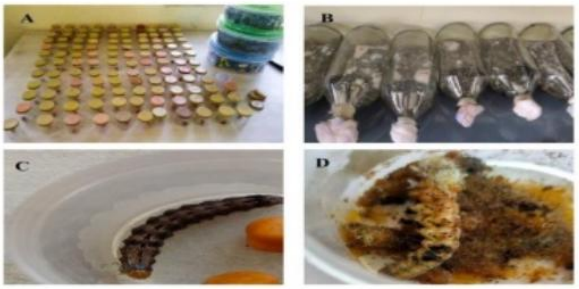

Fig.1 Photographs showing A.Rearing of *H.armigera* B. Maintenance of *N. rileyi* fungal culture C. *H. armigera* larvae without treatmentD. *H. armigera* larvae after treatment with *N.rileyi.*

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