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Do insect - Bacterial symbiosis contributing insecticidal resistance; An evidence from *Helicoverpa armigera* (Hub.) (Lepidoptera: Noctuidae)

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Helicoverpa armigera (Hub.) is a serious lepidopteran pests contributing to the enormous amount of crop loss throughout the world: in India an estimated loss of 500 million USA \$, annually. The major reason for the loss is, this pest is highly resistance to insecticides. Failure of insecticides to control the pest, accounts to the huge investment on insecticides spray and also economic crop losses. The major mechanism for developing insecticide resistance is by means of metabolic, genetic and behavioral modification. But recent investigation showed that major contribution of insect's symbiotic bacteria in the fitness attributes of their host insects. The present study on isolation of culturable bacteria from resistance and lab populations of *Helicoverpa armigera* (Hübner) resulted in six different species of bacteria from resistance population and the lab population carried only one species. Study on non-culturable bacteria using 16SrDNA -V3 region by DGGE method showed that the bacterial species from the larvae of resistance populations had high diversity than susceptible population.

Biography

R Gandhi Gracy has completed her MSc (Agri. Entomology) from TNAU, Coimbatore and at present doing PhD in Agricultural Entomology at UAS-GKVK, Bangalore. She has done 3 months training course on "Application of Bioinformatics in Entomological Research" at Cornell University, Ithaca, New York. She is working as Research Scientist (Entomology) at Division of Molecular Entomology, NBAIL, Bangalore.

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