dentification of virulent isolates of the entomopathogenic fungus Nomuraea rileyi (F) Samson for the management of Helicoverpa armigera and Spodoptera litura (identification of virulent isolates of N. rileyi).

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Abstract

Eleven geographical isolates of the entomopathogenic fungus Nomuraea rileyi (Farlow) Samson of Helicoverpa armigera (Hubner)/Spodoptera litura (Fabricius) origin were studied for efficacy against the two host insects. Laboratory bioassays at a concentration of 2 x 10(8) conidia ml(-1) indicated that N. rileyi isolates of S. litura origin were better in terms of time taken for mycosis and mortality in both the test larvae: S. litura (77-80% mortality in 7 days) and H. armigera (79-85% in 8 days). Among the isolates of S. litura origin, geographical isolates from Hyderabad and Karimnagar were superior in terms of high percent kill as well as 100% germination of conidia within 48 h. Fastest germination was observed with Karimnagar isolate followed by Hyderabad isolate. Conidial yield was highest on barley-carrot extract-yeast extract medium. However in terms of material cost, barley-yeast extract medium was the lowest. The Karimnagar isolate of S. litura origin gave the highest conidial yield on barley-yeast extract medium. Chitinolytic enzyme profiles of different isolates revealed polymorphism in all the isolates from S. litura origin. Overall among the parameters studied the best traits were found in the Karimnagar isolate of S. litura origin.

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