

## Occurrence of *Fusarium subglutinans* on certain Sugarcane Pests

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*Fusarium subglutinans* is known to infect a number of insect pests. Recently, it was reported to be pathogenic to the sugarcane scale insect, *Melanaspis glomerata* (Green) (Raghavendran *et al.*, 1987). During the course of our survey, other sugarcane pests like internode borer, *Chilo sacchariphagus indicus* (Kapur), top borer, *Scirpophaga excerptalis* Walker and scale insect *Pulvinaria elongata* Newstead were also found to be infected by the pathogen. In the field, 2-5 per cent of the population was found infected and mummified by the pathogen. The infected insects were found completely covered with a white fungal mat and examination of smears revealed the presence of both macro- and micro conidia which is a characteristic feature of the genus *Fusarium*.

The fungus was isolated in pure culture on Czapek's dox agar medium from the dead insects and were identified by Dr. T.A. Toussoun, Pennsylvania State University, Pennsylvania, U.S.A. The isolates were maintained separately on Czapek's dox agar slants and used for further studies.

Pathogenicity tests were conducted by spore contamination method, using the respective isolates. The fungus was tested at three concentrations against *S. excerptalis*. Top borer larvae were collected *in situ* with sugarcane tops from the field. The cane tops were split open longitudinally and the fungal suspension in Teepol 0.05% was applied over the larva using a camlin hair brush. The split portions of the cane were held in position by rubber bands and the cane tops were planted in moist sand. Suitable control was also maintained and 30 larvae were used per treatment. The larvae were examined

after 10 days. The fungus caused 10.0, 26.66 and 73.13 per cent mortality respectively at  $10^5$ ,  $10^6$  and  $10^7$  spores/ml.

In the case of *C. sacchariphagus indicus*, third and fourth instar larvae (30 each) were sprayed with the fungus at  $10^7$  spores/ml and reared on sugarcane shoot bits. The mortality observed over 10 days was 50 per cent.

Pathogenicity of the isolate from *P. elongata* was determined in a pot culture experiment. Leaves having nymphs and adults of the scale insect were sprayed with the fungal suspension at  $10^7$  spores/ml along with Teepol 0.05%. Suitable control was also maintained. The fungus caused cent per cent mortality in a week's time. This fungus was also found to infect shoot borer, *Chilo infuscatellus* Snell. due to contamination in the laboratory.

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Key words : *Fusarium subglutinans* natural infection, *Chilo sacchariphagus indicus*, *Scirpophaga excerptalis*, *Pulvinaria elongata*

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