

**Preliminary investigations on grassy shoot disease of sugarcane caused by mycoplasma like organisms**

Grassy shoot disease (GSD) is economically important as it causes significant yield losses in sugarcane.

Mycoplasma Like Organisms (MLOs) are the causative organisms of this disease, Sread of the disease is through infected seed sets (primary infection) and vectors *Proutisto moesta*, *Pyrilla perpusilla*-possible vectors (secondary infection).

A preliminary study on symptom development revealed that the salient features of the primary infection are chlorotic spindle leaves and stunted shoots with profuse tillering, giving a grassy shoot appearance.

The most effective antibiotic and the required concentration for controlling of the grassy shoot pathogen was determined under field conditions.

For the Dipping method diseased seed sets (variety Co-775) were dipped in Tetracyclin 9750mg/1,500mg/1,250mh/l), Eruthromycine (750mg/1,500mg/1,250mg/l) Ledermycine (1000mg/1,750mh/1,500mg/l) solutions for a week and subsequently planted them in the field. Tetracyclin and Erythromycine (350mg/1,250mg/1150mg/l) solutions were used for the Foliar spray method. These solutions were sprayed daily on to the emerging leaves of diseased seed sets (Variety Co-775) and continued this method for five months.

Disease incidences (DI) of both experiments were obtained after five months. Dipping of infected seed sets in an antibiotic solution is more successful for the control of the grassy shoot pathogen rather, foliar spray treatment.

The best treatments (Disease Incidence - )% ) for the dipping method were Ledermycin at 500mg/land Tetracyline at 500mg/l. For the foliar spray the best treatments (Disease Incidence -0%) were Tetracyline 350mg/l and Erythromycine 350mg/l.