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A Preliminary Sutdy on the Control of *Striga densiflora*

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Striga *(Striga densiflora)* locally known as "Bijleeghas" is a well known root parasite to Sugarcane in Bangladesh. It is also semi root parasite to rice plant. In Bangladesh striga is a localized problem. It is reported that the parasite has covered an area of about 100×10^3 hectares and distributed in the region of Ishurdi, Natore, Puthia, Sardah and Malanchi areas (Anon., 1979). At present it has extended in some more new areas of Lalpur and Bharamara Upazilla of Natore and Kushtia district respectively. In India three species of striga such as *S. densiflora*, *S. euphrasioides* and *S.lutea* have been reported in the field of sugarcane, rice, sorghum and some other grasses (Mehrothra. 1983). *Striga densiflora* causes serious damage to sugarcane. The roots of striga form haustoria which penetrate the sugarcane roots from which the parasite draws water and nutrients, eventually wasting and destroying the host (Singh. 1983). The yield loss of cane depends upon striga population and their severity of infestation which varies from 15-84.4% (Rao, 1983 and Rahman *et. al.*, 1988).

It should be noted here that though a general practice of weeding is followed for controlling weeds, but this conventional practice was not found effective for striga. As such it was felt to find out an alternate control measures and a pot experiment was conducted at SRTI during 1987-88 cropping season with following treatments :
T_1= Urea solution (Urea : water = 1 : 20)
T_2= Medium concentration of fresh cowdung suspension in water.
T_3= Creating flooded condition.
T_4= Control.

Seeds of striga (100 mg/pot) were sown with sugarcane setts in pots made of drum (50 cm diameter). In each pot three sugarcane setts (3 – budded) were planted and four number of pots were taken for each treatment. The above mentioned treatments were practiced after three months of seed sowing when striga plants attained 7.5-9.0 cm height.

The results of the experiment presented in the Table 1. It is seen from the Table that all the striga plants in the pots where urea solution (1 : 20) was applied found dead within one day of spraying. It is also seen that striga plants died partially after 7 d in the pots where cowdung suspension was applied while striga plants partially died after 10 d in the flooded pots. After 15 d of treatment all striga plants of both cowdung suspension and flooding treatments were found complete dead while striga plants of control pots survived upto 90 d after treatment (Table 1). At the time of treatment height of sugarcane was about one meter. The sugarcane plants in all treated pots survived and grew well but in control pots, all cane plants died due to severe infestation of striga.

Table 1. Effect of flooding, urea solution and cowdung suspension application on control of *Striga densiflora*.

Treatments	Av. no. of striga plants per pots before treatment	Av. no. of striga plants survived after treatments (Days)					Mortality (%) of striga plants 90 days after of treatment					Survival (%) of sugarcane
		1 d	5 d	10 d	15 d	90 d	1 d	5 d	10 d	15 d	90 d	Plant after six months of treatment
T_1 = Urea solution (1:20)	210	Nil	Nil	Nil	Nil	Nil	100	100	100	100	100	100
T_2 = Cowdung suspension	195	195	195	Nil	Nil	Nil	NM	NM	100	100	100	100
T_3 = Creating flooded condition	220	220	220	118	Nil	Nil	NM	NM	46.37	100	100	100
T_4 = Control	202	202	202	202	202	192	NM	NM	NM	NM	4.95	Nil

NM = No mortality.

Control of striga plants using Agroxone (MCPA) and fernoxone (80% sodium salts of 2-4-D) have been reported elsewhere (Singh, 1983; Mehrothra, 1983; and Rangaswamy, 1972). However, these chemicals are very costly, to some extent toxic, and not available in the market. Considering these difficulties, control of striga by using urea solution will be suitable as it is fairly available, less costly and also less toxic to sugarcane plants as well as mammals. Results sought further experimentation for detail information on concentration of urea solution, age of both sugarcane and striga plants etc for effective and economic way of controlling striga plants.

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