Oviposition Preference of *Spodoptera litura* Fabricius to Different Host Plants

I. S. Patel* and A. H. Shah

Regional Cotton Research Station, GAU, Bharuch

Cotton leaf eating caterpillar, ***Spodoptera litura*** F. which is popularly known as "Prodenia" among farmers in Gujarat. This pest is polyphagous and causes severe damage to many food plants. Moussa *et. al.* (1960) have reported this pest feeding on 112 crop species and some species of weeds. The feeding behaviour, larval development and egg laying preferences of ***Spodoptera litura*** Fb. is varying from crop to crop. The fecundity rate may be also dependant on the availability of host plants. Study was therefore carried out to see the oviposition preference of ***Spodoptera litura*** Fb. on different food plants under Bharuch conditions so as to find out the oviposition preference for ***Spodoptera litura*** Fb. on various food plants.

Laboratory trial was conducted at Regional Cotton Research Station, GAU, Bharuch during the year 1983-84 and was replicated five times with eight different host plants *viz.*, castor, cabbage, tobacco, lucerne, wal, cotton, cowpea and wild tondli. The egg masses of ***Spodoptera litura*** F. were collected from the cotton field and brought to the laboratory for rearing. After hatching, fresh leaves of different host plants were provided separately in wooden cages until pupation. After emergence of the adults, 1 pair was kept in individual glass jar and were fed with 10% honey solution soaked in cotton swab daily. Fresh leaves and branches of different host plants were provided daily to different glass jars and covered with muslin cloth. The number of eggs laid per female in different glass jars on different hosts were counted daily till the death of the female.

TABLE 1

Mean fecundity of *Spodoptera litura* F. on different host plants.

Sr. No.	*Host plants*	*Mean fecundity/ female*
(1)	Cotton, (*Gossypium hirsutum*)	2990
(2)	Cabbage (*Brassica oleracea*)	2379
(3)	Tobacco (*Nicotiana tabaccum*)	3365
(4)	Lucerne (*Medicago sativa*)	1928
(5)	Castor (*Ricinus communis*)	3412
(6)	Wild tondli (*Coccinia indica*)	1425
(7)	Wal (*Dolichos lablab*)	1669
(8)	Cowpea (*Vigna catiang*)	1531
	S.Em.±	111.38
	CD (P = 0.05%)	322.25
	C.V.%	10.65

The mean number of eggs laid by female on different host plants are given

*Present Address: Senior Research Assistant (Entomology), All India Co-ordinated Research Project on Dryland (ICAR), GAU, Sardar Krushinagar.

in Table-1. It is evident from the data, the maximum number of eggs laid/ female were on castor i.e., 3412 eggs/ female and it was followed by tobacco (3365 eggs/female) and cotton (2990 eggs/ female). The less preferred host plants were wild tondli, cowpea and wal on which less number of eggs laid were 1425, 1531 and 1669 eggs/female respetively.

The results are in confirmity with Honsy and Kotby (1960), Sureja (1978) and Parasuraman and Jayaraj (1983) who have reported castor as the most preferred host plants for oviposition and feeding for *Spodoptera litura* F. However the results of the investigation differing from Singh and Byas (1973) who observed that the ovipositional preference of *Spodoptera litura* F. was more on tobacco than castor.

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