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RESEARCH NOTES

Effect of Host Plants of *Bemisia tabaci* (Gennadius) on the Development of its Parasitoids*

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The cotton whitefly, *Bemisia tabaci* (Gennadius) has emerged as a serious pest of cotton in many cotton growing regions of the world. Greathead and Bennett (1981) suggested comparative studies with whitefly parasitoids on alternate host plants. The comparative stability of the plant habitat affords the parasitoids better development conditions (Gerling, 1983). Very little work on this aspect has been reported. Investigations made on the effect of host plants of whitefly on the development of its parasitoids is reported in this paper.

The developmental periods (egg to adult) of the parasitoids, *Encarsia transvena* (Timberlake) and *Eretmocerus mundus* Mercet on *B. tabaci* reared on cotton and brinjal were determined. Fifteen adults of each parasitoid species were exposed in a plastic cage (11 x 9.5 cm diameter) fixed on the host plant with a single leaf infested with 2nd and 3rd instar host nymphs which were previously protected from the parasitoid attack. The parasitoids were removed from the cage after 24h. The parasitized pupae were observed daily to record the time of parasitoid emergence. The mean developmental period was worked out based on parasitoid emergence.

The developmental period of *E. transvena* was observed to be 15 - 25 days with an average of 18.68 ± 3.39 days on *B. tabaci* reared on cotton (Table 1). It averaged 15.91 ± 1.80 days with a range of 14 - 24 days in case of *E. mundus*. The average developmental period of *E. transvena* and *E. mundus*, on *B. tabaci* reared on brinjal was 12.31 ± 1.34 and 20.06 ± 1.70 days, respectively. The shorter and longer periods of *E. transvena* were also 11 and 25 days on brinjal and cotton, respectively. It can be seen that on brinjal, the development of *E. transvena* was shorter (12.31 days) than cotton (18.68 days). On the contrary, the developmental period of *E. mundus* was shorter (15.91 days) on cotton than brinjal (20.06 days).

Thus brinjal and cotton had provided the favourable conditions for the better development of *E. transvena* and *E. mundus*, respectively.

Table 1. Developmental period of *Encarsia transvena* and *Eretmocerus mundus* on different host plants

Host plant	Egg to adult emergence period (days)					
	Encarsia transvena			*Eretmocerus mundus*		
	Nos. studied	Average	Range	Nos. studied	Average	Range
Cotton	48	18.68 ± 3.39	15 - 25	84	15.91 ±1.80	14 - 24
Brinjal	66	12.31 ± 1.34	11 - 18	32	20.06 ±1.70	18 - 21

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Gameel (1969) reported that the developmental period was 21 - 29 days for *Encarsia lutea* and 28 - 32 days for *E. mundus* on cotton. Hafez *et al.* (1983) observed that the developmental period of *E. mundus* was 13 - 14 days on sweet potato. Abdel-Fattah *et al.* (1987) observed that the egg to larval stages together and pupal stage of *E. lutea* was 8.8 - 8.9 and 5.7 - 6.2 days, respectively on sweet potato. The results obtained in the present investigation are in agreement with the findings of the above workers.

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