Use of entomopathogenic nematode as bio-pesticide against Liriomyza *trifolii* (Burgess)

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Abstract

In a Laboratory experiment, the use of entomopathogenic nematode (EPN) *Steinernema feltiae* (Filipjev) (Rhabditida: Steinernematidae) against leaf miner was Liriomyza *trifolii* (Burgess) was conducted in the laboratory at Imperial College, Silwood Park London. The data shown that the mortality of L1 (1st instar larvae) was 56, 60, 68 and 76% after 72 h for nematodes, Nemt+ BUEX 0.5, Nemt+ BUEX 0.1 and Nemt + BUEX 0.2, respectively. The pest mortality reached on 57.6% when nematodes sprayed as a pesticide against 2nd instar larvae. The mortality of pest ranged higher as nematodes mixed with different doses of adjuvant and reached their highest 60, 72 and 76% for , Nemt+ BUEX 0.5, Nemt+Buex 0.1 and Nemt + BUEX 0.2 , respectively. Data for 3rd instar larvae indicates that there was also no effect of adjuvant on the survival of pest. There was an effective role adjuvant when sprayed with nematodes and it was 64, 68, 76 and 88% mortality rate for Nemt, Nemt+ BUEX 0.5, Nemt+ BUEX 0.1 and Nemt + BUEX 0.2, respectively. The LC50 values for *L. trifolii* were 6552.776 (8485.312-5060.376), 4366.076 (6140.459-3104.430) and 3563.694 (4702.963- 2700.407) for 1st, 2nd and 3rd instars larvae when sprayed with *S. feltiae*. It is concluded that *S. feltiae* was an effective control of *L. trifolii* and it should be used with adjuvants.

Key words: *Steinernema feltiae,* leaf miner, adjuvants and larval instars