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Bio-Efficacy of Insecticides Against Lilly Caterpillar, *Polytela gloriosae* Fab. (Noctuidae : Lepidoptera)

J. R. Patel, D. M. Korat, P. K. Borad and M. G. Patel

Department of Entomology, B. A. College of Agriculture, Gujarat Agricultural University, Anand Campus, Anand

The lilly caterpillar, *Polytela gloriosae* Fab. is a very serious and regularly occurring pest of the ornamental lillies. The smooth caterpillar is pretty looking with black, white and red prominent sports, feeds voraciously on lilly leaves and completely defoliate the plants upto the ground level especially during early monsoon (Sachan & Srivastava, 1965). Patel and Patel (1967) have studied the bio-efficacy of endrin, DDT, BHC etc. against this pest but no information is available on recently available insecticides, so a laboratory trial was conducted during November, 1987.

The lilly plants in two metres row were taken for each treatment and the trial was replicated for four times. The insecticides tested were formothion 0.025%; chlorpyriphos 0.02%; dichlorvos 0.05%; carbaryl 0.1%; quinalphos 0.05%; endosulfan 0.035%; monocrotophos 0.036% and fenvalerate 0.01%. Ten second instar lilly caterpillars were released in each petridish having 15 cm diameter and allowed to feed on leaves treated with various insecticides. Everyday in the morning treated leaves were provided as food to the larvae. The larval mortality was recorded after 6, 24, 48 and 72 hrs of the treatment. The data were converted in percentage by using Abott's formula (Table 1).

TABLE 1

Effec· of different insecticides against the larvae of *Polytela gloriosae* F.

Sr. No.	*Treatments*		*% Mortality after spray*			
			6 hrs	*24 hrs*	*48 hrs*	*72 hrs*
1.	Formothion	0.025%	9.09 (2.50)	11.43 (3.90)	11.43 (3.90)	11.43 (3.90)
2.	Chlorpyriphos	0.02 %	68.70 (86.80)	78.57 (96.10)	80.90 (97.50)	80.90 (97.50)
3.	Dichlorvos	0.05 %	58.60 (72.90)	63.43 (80.00)	78.57 (96.10)	80.90 (97.50)

4.	Carbaryl	0.1 %	27.86 (21.80)	54.00 (65.50)	72.54 (91.00)	80.90 (97.50)
5.	Quinalphos	0.05 %	57.69 (71.40)	74.20 (92.60)	80.90 (97.50)	80.90 (97.50)
6.	Endosulfan	0.035%	21.30 (13.20)	39.17 (39.90)	69.83 (88.10)	80.90 (97.50)
7.	Monocrotophos	0.036%	49.55 (57.90)	60.64 (76.00)	76.23 (94.30)	80.90 (97.50)
8.	Fenvalerate	0.01 %	38.95 (39.50)	54.00 (65.50)	74.87 (93.20)	80.90 (97.50)
	S. Em.		5.43	3.57	3.74	0.83
	C. D. at 5%		15.96	10.50	11.00	2.43
	C. V. %		26.17	13.05	10.97	2.29

Figures in parentheses are retransformed values.

The results presented in Table 1 revealed that chlorypriphos 0.02% have significantly higher (86.80%) larval mortality than monocrotophos, fenvalerate, carbaryl, endosulfan and formothion within 6 hrs of the application. Dichlorvos 0.05% and quinalphos 0.05% were found equally effective as chlorpyriphos by giving 72.90% and 71.40% larval mortality respectively. Chlorpyriphos and quinalphos continuously showed their superiority in effectively killing the lilly caterpillars after 24, 48 and 72 hrs of treatment. However, all insecticides except formothion were equally effective after 72 hrs of treatment.

Thus, for getting quick mortality of lilly caterpillar, *Polytela gloriosae* Fab. Chlorpyriphos or guinalphos should be used.

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