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Note on laboratory evaluation of insecticides against the coconut leaf-eating caterpillar (*Nephantis serinopa* Meyrick)

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Investigations on the methods of insecticidal control of the caterpillars of *Nephantis serinopa* were in progress at this research station since 1950. Nirula (1956) recommended 0·2 per cent DDT for the large scale spraying of the infested palms. Pillai and Kurian (1960) observed 0·05 per cent dieldrin to be the optimum dose for the control of caterpillars in the laboratory. Sathiamma *et al.* (1967) reported that the stomach poison basic lead arsenate at 1·537 per cent concentration effected 90 per cent mortality of the caterpillars under laboratory conditions. Sathiamma and Kurian (1970) found 0·05 per cent malathion effective in the field control of the pest.

The present note summarizes the results of laboratory trials on the efficacy of 5 insecticides, viz. carbaryl (1-naphthyl N-methyl carbamate); dichlorvos (0, 0-dimethyl-2, 2-dichlorovinyl phosphate); methyl-0-demeton (dimethyl-ethyl-mercaptoethyl-thiophosphate); trichlorphon (dimethyl trichloro hydroxy ethyl phosphonate) and arprocarb (2-iso propoxy -phenyl-N-methyl carbamate), all proprietary formulations obtained as Sevin 50 per cent W.P. (Union Carbide India Ltd), Nuvan 100 E.C. (Ciba, India Ltd), Metasystox 25 E.C. (Bayer India Ltd), Dipterex S.P. 80 (Bayer India Ltd.) and Unden 50 per cent W.P. (Bayer India Ltd) respectively. Water suspensions or solution of the insecticides were prepared at 0·0125, 0·025, 0·05, 0·075, 0·1 and 0·2 per cent concentration. Methodology adopted was the same as was reported by Sathiamma *et al.* (1967). Ten fourth-instar caterpillars were first allowed to establish on 2 coconut leaflets introduced into open-knobbed bell jars and

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plugged with cotton corks. After 24 hr the 2 leaflets with the pest *in situ* were sprayed under Potter's tower at 0·84 kg per cm² pressure using 8 ml spray fluid, so that both the sides of the leaflets and the larval galleries get a thorough soaking with the spray fluid. Observations on normal, paralysed and dead caterpillars were recorded at 24 hr interval for a maximum of 7 days. Control maintained separately for each insecticide was sprayed with tap water only. A total of 10 replications using 10 test insects per replication for all the treatments were done.

Data was subjected to probit analysis and LC_{50} and LC_{90} for the seventh day of observation was assessed. LC_{50} was 0·034, 0·007, 0·049, 0·008 and 0·034 with fiducial limits 0·025–0·047, 0·005–0·010, 0·040–0·060, 0·006–0·011 and 0·028–0·043 and LC_{90} 1·100, 0·022, 0·413, 0·057 and 0·363 with fiducial limits 0·406–2·978, 0·018–0·026, 0·0263–0·647, 0·045–0·072 and 0·225–0·586, respectively, for carbaryl, dichlorvos, methyl-o-demeton, trichlorphon and arprocarb. The insecticides in the order of efficacy are dichlorvos, trichlorphon, arprocarb, methyl-o-demeton and carbaryl.

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Note on relative resistance and susceptibility of grape varieties to powdery mildew (*Unincula necator* Schw.)

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The powdery mildew disease attacks leaves as well as the fruits and results into serious losses. Since information on the relative resistance of different grape varieties against this disease is not available in India, it was therefore, considered desirable to screen all the varieties against this disease.

Two plants of each of the 76 varieties were observed periodically during the months of January–April and July–September during 1969–70. Disease incidence was recorded on leaves as well as on fruits. Th disease incidence was