

FIELD EVALUATION OF DIFFERENT INSECTICIDES FOR CONTROL OF THE BANANA APHID (*PENTALONIA NIGRONERVOSA* Coq)

Among the diseases affecting banana in Kerala, the bunchy top disease is the most serious. Field experiments were undertaken in the Banana Research Station, Kannara during 1974—1977 to study the field efficiency of some of the newer insecticides for controlling populations of the banana aphid *Pentalonia nigronervosa* (Aphididae: Homoptera) which is the vector of the bunchy top disease, Menon and Christudas (1966) reported that the contact insecticides endrin and diazinon are far more superior than the systemic insecticides for controlling the banana aphid. Sastry and Singh (1973) have stated that four to six applications of systemic insecticides such as methyl demeton, dimethoate and phosphamidon as foliar sprays and one or two application (s) of granular phorate and disulfoton to the soil reduced the white fly (*Bemisia tabaci*) population, which is the vector of the yellow vein mosaic of bhindi. Nair *et al.* (1973) reported that the application of thiodimeton and phorate granules were highly effective in controlling the banana aphid.

The highly susceptible *nendran* variety was used in the experiments. The foliar insecticides used in this trial were dimethoate, ethyl parathion, methyl demeton, phosphamidon, methyl parathion-DDT combination, thiometon, endosulfan carbaryl, mercaptothion and formothion. The granular forms of insecticides used for soil application were disulfoton and phorate. The first soil application of granular systemic insecticides was given at planting and the granules were applied subsequently at intervals of 45 days. Altogether six applications were given. The foliar application of the insecticides was commenced when the banana plants were one month old and the spraying was repeated at intervals of 15 days. Altogether 15 sprayings were given. The aphid population in all the plants were recorded at fortnightly intervals.

The data on the aphid populations are presented in Table-1. In the first experiment, all the treatments except mercaptothion were significantly superior than control. The maximum reduction in the aphid population was noticed in the case of phorate and disulfoton treated plots. In the second and third experiments, all the treatments were found to be significantly superior to control. Considering the mean number of aphid populations, phorate and disulfoton were found to be consistently effective than other treatments.

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Table 1

Relative efficiency of insecticides against the banana aphid *Pentalonia nigronervosa*

Sl. no.	Treatments	Mean no. of aphids per treatment		
		1974-75	1975-76	1976-77
1	Dimethoate 0.05% (Rogor 40% EC)	11.0	93.3	41.0
2	Ethyl parathion 0.02% (Ekatox 50% EC)	46.3	89.6	17.6
3	Methyl de-meton 0.02% (Metasystox 25% EC)	8.0	87.3	35.3
4	Phorate 7.5 g/plant (Thimet 10% G)	No aphid population	11.6	10.0
5	Phosphamidon 0.05% (Dimecron 100% EC)	19.0	194.0	17.6
6	Methyl parathion + DDT 0.05% (Metacid combi 50% EC)	8.3	137.3	not included
7	Mercaptothion 0.05% (Malathion 50% EC)	175.6	192.6	35.0
8	Thiometon 0.02% (Ekatin 25% EC)	21.0	201.0	21.0
9	Endosulfan 0.05% (Thiodan 35% EC)	4.3	84.3	13.3
10	Disulfoton 20 g/plant (Disyston 10% G)	0.66	11.6	13.3
11	Carbaryl 0.2% (Sevin 50% WP)	119.0	210.3	35.0
12	Formothion 0.05% (Anthio 25% EC)	50.6	178.0	32.0
13	Control	307.0	2177.0	364.0
	CD (p=0.05)	165.7	516.15	111.3

സംഗ്രഹം

കണ്ണൂർ വാഴഗവേഷണ കേന്ദ്രത്തിൽ കുറുനാമ്പ് രോഗത്തിനെ പരത്തുന്ന വാഴപ്പേനീനെ നിയന്ത്രിക്കുവാൻ മിന്നുകെല്ലും നടത്തിയ പരീക്ഷണത്തിൽ raifolro പത്തിലുള്ളതും അത്ഭുതപരമായ ശക്തിയുള്ളതുമായ തൈമറ്റ്, ഡൈസിസ് റോൺ എന്നീ കീടനാശിനികൾ വാഴപ്പേനീനെ നിയന്ത്രിക്കുവാൻ വളരെ ഫലപ്രദമായി കണ്ടു.

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