

A P P E N D I C E S

APPENDIX - A

APPENDIX - B

APPENDIX - A

Diagnostic characters, range of hosts and bionomics of the mites studied in the present investigation based on S.K. Gupta, Handbook : Plant mites of India.

1) Tetranychus telarius (Linn.)

Diagnosis

- i) Carmine mite with longitudinal striae between third pair of dorsocentral hysterosomals.
- ii) In male, tibia I with 4 sensory and 7 tactile setae, tarsus I with 3 sensory and 3 tactile setae proximal to duplex setae; tarsus II with 1 sensory and 4 tactile setae proximal to duplex setae.
- iii) In female, palpus with terminal sensillum 2 times as long as broad, tibia I with 1 sensory and 1 tactile setae, tarsus I with 1 sensory and 3 tactile setae proximal to duplex setae; tibia II with 7 tactile setae, tarsus II with 1 sensory and 4 tactile setae proximal to duplex setae.

Hosts : Apples, American Cotton, beans, lady's finger, bitter gourd, black gram, cucumber, cucurbits and many other agricultural and horticultural plants.

Bionomics

Life cycle (egg-adult) takes an average of 14.3 days during January. Duration of other stages are - egg 5-8 days, Protonymph : 3-4 days, deutonymph : 3-5 days. Longevity of adult males : 1-4 days and female 8-14 days. Population peak is attained during January to March.

2) Oligonychus coffae (Nietner)

Diagnosis

- i) Body bright crimson, ventrally dark purplish or bronzy.
- ii) In males tibia I with 3 sensory and 7 tactile setae, tarsus I with 3 sensory and 2 tactile setae proximal to duplex setae, tibia II with 5 tactile setae, tarsus II with 1 sensory and 3 tactile setae proximal to duplex setae.
- iii) In females tibia I with 1 sensory and 7 tactile setae, tarsus I with 1 sensory and 3 tactile setae proximal to duplex setae, tibia II with 5 tactile setae, tarsus II with 1 sensory and 3 tactile setae proximal to duplex setae.

Hosts: Tea, Coffee, Jute, Citrus, etc.

Bionomics:

During May-June life-cycle is completed in 9.4-12 days. The duration of larval stages (protonymph and deutonymph) are 1.5 to 2.5 days and 3.5 days respectively. The average longevity of females and males are 24.4 and 12 days respectively. The population peak is attained during April to June.

3. Petrobia harti (Ewing)

- i) The dorsal body setae set on prominent tubercles and longer than the intervals between their bases, 5th pair of dorsal setae much shorter than others.
- ii) First pair of legs of female about twice as long as body.
- iii) Peritreme ends in a simple bulb.

(III)

iv) Setae of males are shorter than those of females.

v) Legs longer in relation to Body.

Hosts:

Brinjal, raddish, apple, jack fruit etc.

Bionomics:

Not much is known about its bionomics.

4. Brevipalpus obovatus (Donnadieu)

Diagnosis

i) Tarsus II with a single sensory rod.

ii) Propodosoma without reticulation mediodorsally.

iii) Distal segments of palpus with 3 setae.

iv) Body striae irregular.

Hosts:

Tea, Solanum melongena, Raphanus sativus, Calotropis
procera etc.

Bionomics:

Life cycle is completed in 11-26 days and longevity of
adult varies between 3-26 days depending upon the temperature.

APPENDIX - B

Chemical name of the active ingredients of some commercial pesticides

<u>Commercial Name</u>	<u>Chemical name of the active ingredient</u>
1. Azinphos-methyl	S-(3,4-Dihydro-4-Oxobenzo [d] [1,2,3] triazin-3-ylmethyl), O,O-dimethyl phosphorodithioate.
2. Methyl demeton/ Propagite/Metasystox	S-2-Ethylthioethyl o,o- dimethyl phosphorothioate.
3. Ethion	o,o,o,o' - Tetraethyl S,S'- methylene bis(phosphorodithioate)
4. Aramite	2-(4-tert-Butylphenoxy)- 1-methylethyl 2-chloroethyl sulphite.
5. Flucythrinate	(RS)- α -cyano-3-phenoxy benzyl (S)-2-(4-difluoromethoxyphenyl)- 3-methylbutyrate.
6. Endosulfan/ Thiodan	C,C'-(1,4,5,6,7,7-Hexachloro- 8,9,10-trinorborn-5-en-2,3- ylene) (dimethylsulphite)
7. Trithion/Carbophenothion	S-4-Chlorophenylthiomethyl o,o-diethylphosphorodithioate.
8. Parathion	o,o-Diethyl o-4-nitrophenyl phosphorothioate.

(V)

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| 9. Calixin | 2,6-Dimethyl-4-tridecylmorpholine |
| 10. Kelthane/Dicofol | 2,2,2-Trichloro-1,1-bis(4-chlorophenyl)ethanol. |
| 11. Proclonol | 4,4'-Dichloro- α -Cyclopropyl benzhydrol. |
| 12. Triazaphos | o,o-Diethyl o-1-phenyl-1H-1,2,4-triazol-3-yl phosphorothioate. |
| 13. Citreazon/Benzoximate | 3-Chloro- α -ethoxyimino-2,6-dimethoxybenzyl benzoate. |
| 14. Chlorobenzilate | Ethyl 4,4'-dichlorobenzilate. |
| 15. Permethrin | 3-Phenoxybenzyl (1 RS, 3 RS, 1 RS, 3 SR)-3-(2,2-dichlorovinyl)-2,2-dimethyl cyclopropane carboxylate. |
| 16. Fenvalerate | (RS)- α -Cyano-3-phenoxybenzyl (RS)-2-(4-chlorophenyl)-3-methylbutyrate. |
| 17. Phosmet | o,o-Dimethyl S-phthalimidomethyl phosphorodithioate. |
| 18. Tetradifon/Tedion | 4-Chlorophenyl 2,4,5-trichlorophenyl sulphone. |
| 19. Diflubenzuran | 1-(4-Chlorophenyl)-3-(2,6-difluorobenzoyl) urea. |
| 20. Dichlorvos | 2,2-Dichlorovinyl dimethyl phosphate. |

(VI)

<u>Common name</u>	<u>Chemical name (IUPAC)</u>
21. Methidathion	S-2,3-Dihydro-5-methoxy-2-oxo-1,3,4-thiadiazol-3-ylmethyl o, o-dimethyl phosphorodithioate.
22. Dimethoate/Roger 40	o, o-Dimethyl S-methyl Carbamoylmethyl phosphorodithioate.
23. Phenthoate	Ethyl 2-dimethoxythiophosphorylthio-2-phenylacetate.
24. Pheniscbromolate/ Bromopropylate	isopropyl 4,4'-dibromobenzilate
25. Dinobuton	2-sec-Butyl-4,6-dinitrophenyl isopropyl carbonate.
26. Fenzazflor	Phenyl 5,6-dichloro-2-trifluoromethylbenzimidazole-1-carboxylate.
27. Systox/Dageton	o, o-Diethyl o-2-ethylthioethyl phosphorothioate.
28. Binapacryl	2-sec-Butyl-4,6-dinitrophenyl 3-methyl but-2-enoate.
29. Galecron/Chlordimeform	N ² -(4-Chloro-o-tolyl)-N,N'-dimethylformamide.
30. Malathion	Diethyl (dimethoxy thiophosphorylthio)succinate.
31. Oxydemeton-methyl	S-2-Ethylsulphenyl ethyl o, o-dimethyl phosphorodithioate.