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Dr. R.K. Jain
 I.T. College, Botany
 Department, Lucknow, India.

Effect of natural plant products on biography of Aphids

Dr. R.K. Jain

Abstract

The experiment involves the biology of Aphids in reference with nymphal development time, moulting behaviour & pupal development, the fecundity (number of progeny produced) was seen on adult aphids the moribundity and mortality was also observed. The natural plant products were taken in different dilutions and tested. in aphid (*Aphis gossypii*), mostly decreased metabolism was observed with reduction of body size and morphological behaviour even after one day of treatment.

Keywords: Natural plant products, Aphids, Nymphal development time, Moribundity, Mortality

1. Introduction

Insects like Aphid (*Aphis gossypii*) and (*Aphis craccivosa*) are very sensitive to the surrounding medium and even on surfaces of plants where settle down. The experimental steps involved different combinations of natural products along with synthetic chemical like Dimeron. The treatments act like with insectidal property and hence overall behavioural life cycle gets changed in different age groups of vectors.

Method

First of all, experimental requirements are made available like cages with lids along with seasonal potted plants which are most sensitive for viral incidence and infection frequency. Different concentrations of natural plant products like neem oil, neem leaf, neem cake and even neem kernel as required are prepared in terms of by weight, volume or in percentage as required. In this experimental work 2% neem oil and 1% detergent depending on number of days of experimentation are prepared. Soap solution treatment was also taken into account.

Observation, findings and analytic Computation

Treatment	Vectors	Host plant	Nymphal development time (days)	Mortality %	Progeny appeared per day
Neem oil 1%	<i>Myzus persicae</i>	<i>Nicotiana tabacum</i>	8	76	44
2%	<i>Myzus persicae</i>	<i>Nicotiana tabacum</i>	7	82	40
Neem kernel extract	<i>Aphis gossypii</i>	<i>Solanum nigrum</i>	5	46	60
Dimecron	<i>Aphis craccivora</i>	<i>Crotolaria juncea</i>	6	52	72
Soap solution	<i>Myzus persicae</i>	<i>Nicotiana tabacum</i>	5	55	67

Discussion

The use of natural products is more significant as given good desired results than the solution use of dimecron and soap. The number of days nymphal development were found enhanced along with satisfactory mortality percent and also of decreased progeny. The progeny decreased is responsible for decrease in population and hence accordingly frequency of incidence of disease will also be found

Correspondence:
Dr. R.K. Jain
 I.T. College, Botany
 Department, Lucknow, India.

decreased. It is expressive that nymphal developmental behaviour gets changed. It is being observed that application of neem oil by its 1% and 2%, sprayed out of which 2% neem oil has given desired results.

Conclusion

Selective application and use of corrective dilution percent on selective host plants which are more prone to vector is necessary for getting desired results.

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