



WWJMRD 2021; 7(10):134-135  
www.wwjmr.com

International Journal  
Peer Reviewed Journal  
Refereed Journal  
Indexed Journal  
Impact Factor SJIF 2017:  
5.182 2018: 5.51, (ISI) 2020-  
2021: 1.361  
E-ISSN: 2454-6615

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## Study of nymphal development and nymphal growth after effects of aphids by the application of neem seed kernel.

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### Abstract

The aphids like *Aphis gossypii* A. *Craccivosa*, *Brevicoryne Brassicae*, *Myzus persicae* and *Rhopalosiphum maidis* are most prominent insect viral vectors. The time of arrival of aphids on the host plants was found to vary, the infestation of these different species of aphids occur mostly during cooler weather conditions in temperature range of 7<sup>0</sup>-35<sup>0</sup> C. Accordingly due to favorable incidence on to the under surface of leaves, the oviposition starts which is different for different species in terms of density then nymphs behaviour is found varied on spraying of neem cake kernel powder solution by its different concentrations.

**Keywords:** Vectors, whiteflies, *Bemisia tabaci*, *Aphis gossypii*, Soil amendments

### 1. Introduction

Overall biological and embryological in terms of ecdysis/Moulting Ist, 2nd and 3rd were studied, observed, experimented and demoshated along with the record of data collected for analytic and computational diagnosis of different concentrations of neem cake kernel and the data found were different. This kind of monitoring observation is very important.

### Method

To proceed the experiment 5 groups of potted plants as required and sufficient are made available by growing plants specially in their favourable seasonal conditions for statistical and biometric data collection of nymphal instar stages study. The study also involved the correlation with that of symptom appearance based on nymphs survived and for it number of days were counted. The neem cake kernel extract of powder was also diluted by its different concentrations with that water as control.

**Observation table**

Plants for experiments in terms of number	kernel extract dilution	Days of nymphal development (on average)	Aphids			Percentage mortality of nymphs
Tobacco	1:2	15	<i>Myzus peticical</i>	<i>Aphis gossypii</i>	<i>Aphis craccivosa</i>	95%
	1:20	5				70%
	1:200	3				45%
Bhindi	1:2	18	<i>Myzus peticical</i>	<i>Aphis gossypii</i>	<i>Aphis craccivosa</i>	89%
	1:20	8				65%
	1:200	5				48%
Mung	1:2	21	<i>Myzus peticical</i>	<i>Aphis gossypii</i>	<i>Aphis craccivosa</i>	96%
	1:20	9				65%
	1:200	6				40%

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### Discussion

When the above table is observed for different species of aphids along with different diluted concentrations of neem cake kernel on variety of plants, sprayed and waited for oviposition, nymphs

appearance along with mean exuviate per day of stages with instar larval development for the analysis of percentage of mortality. During experiment, it has been seen that different spraying concentrations were differently effective by their impact on development of nymphs.

When observed for tobacco (*Nicotiana tabacum*), Bhindi (*Abelmoschus esculentus*) and Mung (*Vigna radiata*), in each category the after effect of spraying was found different.

### **Conclusion**

Neem cake kernel can be made effective by its use and for which detailed study & analysis is required and can be in good aspect as one the natural plant product among others in nature.

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