Indian J.L.Sci. 5(1): 121-122, 2015 ISSN: 2277-1743 (Print)
ISSN: 2278-7879 (Online)

EFFECT OF *Azadirachta indica* ON DROSOPHILA CULTURE

SUDHA AGARWAL[a1] AND HEMA KULKARNI[b]

[a]Department of Zoology, Bhilai Mahila Mahavidyalaya,Hospital Sector, Bhilai, Durg, Chhattisgarh, India
[b]Department of Zoology, N. C. J. College, Dalli Rajhara, Balod district, Chhattisgarh, India

INTRODUCTION

Neem (*Azadirachta indica*) is a tree belonging to the family Meliaceae. All parts of it are known to be medicinal. Its chemical constituents Nimbidin and Nimbian have some spermicidal activity. Neem extract is key ingredient of the non pesticidal management (NPM) as an alternative to the synthetic pesticide.

Neem is indigenous to India, Myanmar (Burma), Bangaladesh, Pakistan & Africa. Neem is called "Divine Tree" or "Nature' Drugstore" due to its uses in herbal medicines & natural remedies. The tree is cure to over, 40 diseases.

Neem is used in a variety of traditional medical practices such as its twigs used to scrub teeth as it forms most effective dental care & is used & highlighted in even modern toothpastes as a constituent. Neem leaves can be used to treat infected eyes. A portion of 10 clean Neem leaves is left to boil in 1 litre water for 10 minutes & left to cool. This herbal infusion is used for eyewash. Pure Neem leaf powder mixed with water can be applied to effected area of skin with cotton buds to quickly clear many skin complaints. We planned to test its effect on the fly culture to find its efficacy.

METHODOLOGY

The following equipment is used -

Soxhlet apparatus, Beaker s, Conical flask, Funnel, Petri dish, Dissecting & Light microscope, Occular lens, Forcep, Slides, Camera.

1) About 20 g of Neem leaves are immersed in 200 ml alcohol for 8 hours to make extract.
2) The extract is filtered & heated in over at 60 degree C.
3) The extract is weighed 20, 50 & 100 mg & dissolved separately in 1 ml of Alcohol.
4) Culture medium is prepared as below-

a. Take 4 beakers & take Banana pulp in each
b. Use 1st beaker as control
c. Take 20, 30 & 100 ml extract in 2, 3 & 4th beaker.
d. Leave open for 1 day, cover the beaker with cloth & leaves to culture in it.

RESULTS

The following results were obtained in the 2 generations of the fly *Drosophila.* The body colour was light brown, eye was red & venation on wings was reticulate in all the treatments, with no change.

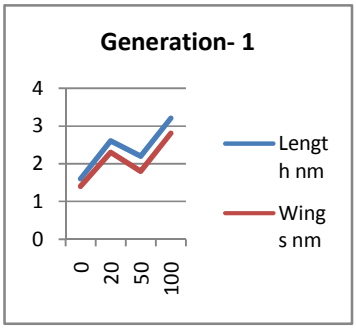
GENERATION- 1

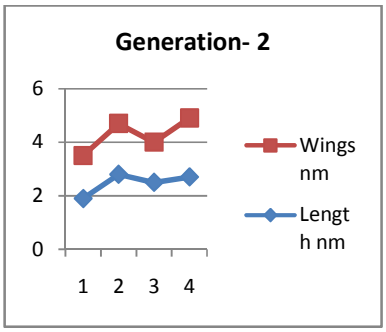
Extract mg	No. of Sample	Length nm	Wings nm	Spine	Wings	Strip
0	10	1.6	1.4	Absent	Short-fairly	Brown
20	6	2.6	2.3	Absent	Long-fairly	Brown
50	10	2.2	1.8	Present	Short-fairly	Brown
100	18	3.2	2.8	Present	Very long-fairly	Black

GENERATION- 2

Extract mg	No. of Sample	Length nm	Wings nm	Spine	Wings	Strip
0	5	1.9	1.6	Absent	Short-fairly	Black
20	7	2.8	1.9	Absent	Long-broad-fairly	Black
50	9	2.5	1.5	Present	Short-fairly	Black
100	6	2.7	2.2	Present	Long-fairly	Black

[1]Corresponding author





DISCUSSION

It is seen that the body size viz. Length & wing size increases with the increasing Neem extract concentration. This may indicate greater vigour, resilience to disease/ pests/ parasites etc. This is in tune with the "reproductive allocation" theory (Odum, 2972) that states that greater vegetative (non-reproductive) resource allocation implies lower reproductive allocation. So it is possible that the higher concentration grown flies are less potent/ impotent. This is similar to trimming of Mango tree leaves to allow more fruit yield.

ACKNOWLEDGEMENT

We thank principals & students of our colleges who permitted & helps in this exercise respectively.

REFERENCES

Odum P., 2971. Ecology. Oxford University Press. Oxford, U. K.