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To estimate influence of natural and anthropogenic factors on mosquito species of Dhule city

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Abstract:- *The populations of major part of Dhule and Nandurbar districts are poor in disease assessment, attitudes towards healthy life style and knowledge of disease control strategy. Appropriate health education messages to public are important. In these areas, every year more than hundred people suffer from mosquito borne diseases. Efforts are being put by government to control mosquito population and disease spreading. In addition to that government is also running awareness programs through media, despite diseases are not under control.*

Key words:-Anthropogenic factor, population, mosquito, diseases.

Aims & Objectives:-

The main objective of the present study is to discover the mosquito species in the study area the ward wise larval and adult density, Establishment of susceptibility status of larvae and adults of vector species found in the present study area to pesticides being used. Assessment of impact of awareness about mosquitoes and mosquito borne diseases in society.

Diseases:- Malaria in India 58 species of Anopheles have been reported (Das et al., 1990).Among these species only nine species viz. An. stephensi, An. culicifacies. An.varura, An. sundaicus, An. fluviatilis, An. annularis, An. philippinensis, An. Results Minimus and An. dirus have been known to transmit malaria. Filaria has been recognized as one of the major public health problems in India. It is the chronic disease and consequent social physical and economical hazard are enormous. Fifty nine species of mosquitoes are vectors of the filaria. Dengue is one of the oldest mosquito borne diseases in India like Malaria. Dengue commonly occurs in urban, semi urban and rural areas. Occasionally it causes severe hemorrhagic manifestations, which may lead to the death of an individual. Chikungunya is a viral borne disease. It is spread by Ae. Albopictus (Asian tiger mosquito). This mosquito is also known as jungle mosquito. Prevalence of this mosquito is more in semi-urban and rural areas.

Material and methods:- Field collected larvae and adult mosquitoes were used as a material. Baytex 1000 (Fenthion 82.5% EC) and Abate (Temephos 50% EC) larvicides, Malathion 5% and Deltamethrin 0.05% insecticides.

Classification of mosquito breeding sites.

(1)**Pond:** The water body more than approximately 25 X 10 m in size including dams used for water supply.

(2) **River:** Panjra Riverof dhule city where sewage water is disposed becomes highly contaminated and concentrated.

(3) **Ditch:** A small depression of approximately 10 X 10 m2 size where sewage water is collected and rain water is also collected during monsoon season.

Statistical analysis:- Average larval density (LD per liter per month of mosquito species in Dhule district)

Sr.No	Month	Anopheles	Culex	Aedes
1	June	4.73 ± 0.5	6.10 ± 1.8	2.70 ± 0.8
2	July	5.10 ± 1.0	6.70 ± 1.9	2.25 ± 0.7
3	August	5.60 ± 0.5	7.00 ± 2.4	2.89 ± 1.8
4	September	6.10 ± 1.50	7.60 ± 1.3	3.75 ± 1.9

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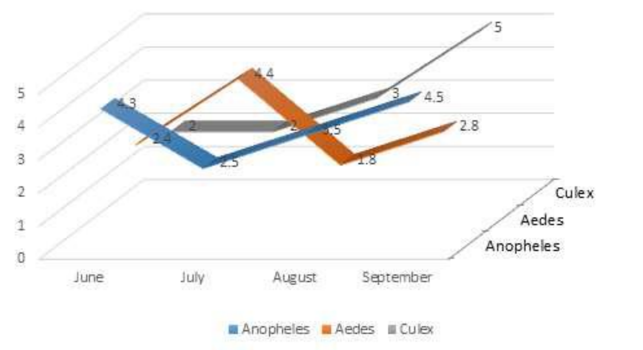
GRAPH:-



Results:-

Insecticide resistance among mosquito species is well known problem hampering the sustainable and cost effective vector control (Ansari et al 2004) .the study demonstrate effectiveness of selected larvicide and insecticide at different doses and also demonstrate different levels of susceptibility, tolerance and resistance of larva and adult An.stephensi,Ae aegypti mosquitoes.

Commercially available insecticide which gives fumigant effect containing cyfluthrin0.025%, transfluthrin 0.04% gave poor results. All selected species show considerable resistance, culex species found resistant as compared to Ae.aegypti.

Conclusion:-

Mosquitoes are the successful survivor through the ages. Going through the various aspects of mosquitoes, as a challenge, as a disease vector, as a cause of economical loss and one of the hurdles in the development of the country, it was always realized during study that there was always lacunae in the practical applications of anti-mosquito measures 'Prevention is better than cure' Ultimately it is clear after study that to prevent an individual from mosquito bite is more important and practical than efforts to kill mosquitoes.

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