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STUDY OF AEROMYCOFLORA OF RESIDENTIAL AND ADJOINING AREA OF KOPAR, DIST- THANE

Chandanshive Amita C. and S. S. Yeragi

Department of Botany, K. J. Somaiya college of science and Arts, Vidyvihar(E), Mumbai, Maharashtra.

ABSTRACT:

A number of air-borne particles including pollen and fungal spores are responsible for respiratory disease. The atmosphere contains an array of bio-particulate materials such as bacteria, viruses, fungal spores, pollen grains, hyphal fragments, mold spores, epidermal hairs, vegetable cells, animal danders, dust mites, insect scales and other air borne micro-organisms which are passively transported by air.

Quite a large number of respiratory allergens, plant and animal pathogens are daily carried over by wind and distributed over distant areas. The air-born inoculum is the most dangerous causing plant diseases and allergic reactions in human and domestic animals. The present investigation is aimed at study of aeromycoflora of residential area of kopar,

Dist- Thane was conducted from January 2017 to January 2018. Techniques used for identification were Gravity slide Technique and culture plate count technique. Most dominant fungal types observed were *Aspergillus*, *Cladosporium*, *curvularia*, *Nigrospora*, *Rhizopus* etc.

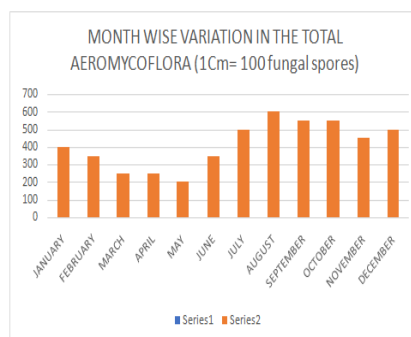
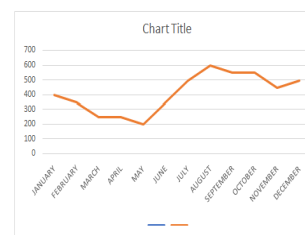
KEYWORDS: Aeromycoflora, residential area, health hazards.

RESULT AND DISCUSSION

Many human allergic diseases such as asthma, seasonal allergic rhinitis are attributed to inhalation of airborne fungal spores. Atmospheric fungal population shows seasonal variations probably due to climatic factors and vegetation.

Gravity slide technique revealed 15 fungal spores types. *Cladosporium* showed highest percentage to the total air-spores. The other major fungal types were identified at all the sites were *Alternaria*, *Aspergillus*, *Curvularia*, *penicillium*, *cephalosporium*, *Helminthosporium*, *Fusarium*, *Nigrospora*, *Rhizopus* etc.

The concentration of *Cladosporium* found to be dominant during monsoon seasons followed by winter and summer. This shows that high relative humidity, moderate temperature and rainfall favour the sporulation and growth of this fungus. The peak of aeromycoflora of residential area found that in between September – November.



CONCLUSION

After the study of various residential sites it was observed that in the close environment number of fungal spores are less than open environment. Fungal segments are responsible for variety of respiratory disease in human, plants and animals. Air quality of inside residential area has become an crucial factor,

which is partly related to fungal contamination. It was also observed that the fungal species in residential area exhibit seasonal fluctuations and supported by moderate temperature and high humidity. Impact of airborne fungal spores including their release, dissemination, deposition and effect is of great significance to identify health hazards and physiological disorders in living beings.

Study of this aspect is highly interdisciplinary in nature and has tremendous scope to find the significance application in human health.

Thus clean environment is of prime importance to reduce the fungal spore load in the air bindings, protein fractions of different fungal allergens will help in immunotherapeutic procedure. From the study we can investigate the effects of aeromycoflora and their allergic disease on human.

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