

STUDY OF PHYLLOSPHERE FUNGI OF SOME ORNAMENTAL PLANTS

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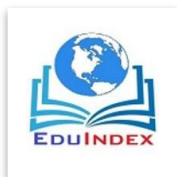
Abstract – The present investigation was performed to observe the phyllosphere fungi of some ornamental plants. The leaf surface is exposed to air currents. With the air currents certain microscopic objects are carried to leaf surface. Ornamental plants are commercially important grown in either open field or under glass house condition. Fungi are found every where, leaf surface provides a suitable environment for microbial growth. Phyllosphere fungi were isolated from *Hibiscus rosa sinensis* and *Ixora coccinea*, fungal species isolated were *Aspergillus*, *Curvularia* and *Fusarium*.

Key words – Ornamental plants, phyllosphere, fungi

Introduction –

The term phyllosphere was introduced by Last (1955) to denote the leaf surface environment. Leaf surface provides a suitable habitat for the growth, reproduction and multiplication of microorganism because the surface medium of leaf comprises of exudates, chemical compounds resulting from biological activity of various microbes. (Deepika Chauhan et al 2014). Fungi are found everywhere such as in water, air and soil. The causal organisms responsible for various plant diseases comes through different agencies. Lot of investigations have been carried out on phylloplane flora of leaf surfaces of plants grown for various purposes. (Abdul latief Abadi, 1990, Bharat Rai et al 1980, Kiss 2003, Steven E. et al 2003, Sandeep Shukla, R.B. Sharma 2016). Ornamental plants make environment beautiful and keeps it refreshing. Many physical, chemical and biological factors brings various changes in population of fungi and due this fungi shows variation in their occurrence. Microbial communities of leaves are diverse and include many different genera of microbes. Interactions between microorganisms, are antibiosis and parasitism etc. which protect plant from pathogenic fungi (Chakraborty et al 1994).

Material and Methods –



Sample Collection : The fresh leaves of China rose and Ixora were collected from various localities and brought to laboratory.

Isolation of Phyllosphere fungi :

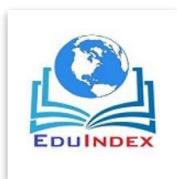
Phyllosphere fungi were isolated from leaves of test plants through leaf washing technique

(Aneja 2003). The collected leaf samples were placed in 250 ml conical flasks containing 100 ml sterilized distilled water. The conical flask was hand shaken for homogenous suspension for about 30 minutes. This suspension was used for further study. One ml of suspension was poured in to petriplates containing sterilized PDA medium. Incubated for Then petriplates for seven days. After incubation fungi were observed and recorded,

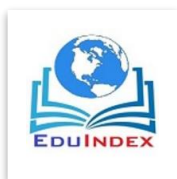
Result and Discussion :

Fungal Species from both leaf surface of plants

Sr.No.	Name of the plant	Surface of the leaf	Fungi	Season	Colonies
1	<i>Hibiscus rosa sinensis</i>	Dorsal	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>	Rainy	12
					3
					7
		Ventral	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>		7
					4
					9
		Dorsal	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>	Winter	7
					4
					3



		Ventral	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>		5 3 3
		Dorsal	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>	Summer	3 2 4
		Ventral	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>		3 2 4
2	<i>Ixora coccinea</i>	Dorsal	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i> •	Rainy	7 6 10
		Ventral	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>		8 7 12

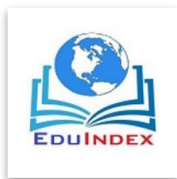


		Dorsal	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>	Winter	5 4 5
		Ventral	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>		6 7 9
		Dorsal	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>	Summer	3 - 4
		Ventral	• <i>Aspergillus species</i> • <i>Curvularia Species</i> • <i>Fusarium species</i>		3 - 2

During the present investigation ,it was reported that the species of *Fusarium* and *Aspergillus* were frequently seen on dorsal and ventral surface of both test plants. Remarkable variation was seen in summer ,may be due to fluctuations in the temperature.

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