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Sooty Molds on the Leaves of Some Important Medicinal Plant

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ABSTRACT- Sooty mold is a charcoal black fungus that appears as a black coating on the surface of leaves, fruits and branches of many deciduous and evergreen shrubs arid trees. This fungus is no pathogenic to plants. However as it covers the leaf surface it is blocking light and reducing light and reducing photosynthesis essential for plant growth. In present study & sooty mold fungi were recorded. All are from deuteromycites. Humicola grisea on leaves of Elaeodendron glaucum have severe case. Total control of sooty mold is not possible so that management stratages have been suggested in this paper.

Key words – Medicinal plants, Sooty molds, Fungi.

I. INTRODUCTION –

Sooty mold as the name implies, is a black growth on the surface of leaves, especially those in shade. The sooty mold fungi are not plant parasite but grow as saprophyte on the sweet honey dew deposited by various in-sects, specially aphids (ag.nosu.edu.pubs/plantsci/hortcrop/pp 6:97-1) The symptoms appear on leaves or needles, fruits branches of certain plants as sootygray-black, velvety, often crust like coating. The coating is actually the growth of one or several species of black coloured fungi. The coating can be removed easily by rubbing the leaf between fingers thus exposing the green leaf tissue below. Sooty molds grow only on the plant surface and will not kill plants. In fact, sooty molds often grow on sidewalks or fences under infested trees. Sooty molds normally considered to be a cosmetic or aesthetic problem. In extremely severe cases black growth of fungi block enough sunlight to interfere with photosynthesis. In such cases leaves, fruits and new shoots may be smaller or less instensely colored. Respiration can be reduced through the physical closure of stomates by molds, vegetative growth under drought conditions plants affected with sooty mold will with more rapidly than unaffected plants. If plant vigor has been reduced, the plant may also be predisposted to futhere injury by other insects disease or environmental stresses.

II. MATERIAL AND METHOD –

Periodical survey of different forest villages around Mandla Suburbs was done during July 2018 to June 2019. The collection were made in the natural field condition. The symptoms caused by fungi in natural conditions were carefully examined at the collection spots and were noted. The specimens were dried by usual pressing method. The specimens packed with data recorded on the evelop were brought to laboratory. After careful examination of symptoms the slides were prepared. The fungi which were superficially associated with host such as the sooty molds were mounted on a glass slide by collodian teeniques (Hughes, 1976) When a drop of collodian solution was applied to a colony of such organisms on a leaf, the fungus got embedded entirely and the dired film could be peeled off readily from the hosts surface. Removal of collodion by aceton on a glass slide resulted in undisturbed preparation.

The identification of fungi were made by J. Hughes S.J. (1976), D. Hawks worth, B.S. Sutton and Ainsworth G.C. (1983), kamal, Rai A. N. Morgan Jones G. (1984 b) Kamal, Verma, R.K. and Morgan – Jones G (1986) and R.N. Tandon (1935)

III. RESULT AND DISCUSSION –

The result of studies is depicted in TAble No. 1 shows the host plant, fungi inhibiting on leaves, severity of disease and occurance of fungi in different seasons. During investigation 5 fungi species were observed on 10 host plants all of those fungi found on plants are from deuteromycetes. Sarcinella is the most common genera which found on 5 host plant sp. the severity of occurance of fungi sarcinella sp. on celastrus spp. is very ligh while Humicola griseas Traaen on. Living leaf of and Elaeodendron glaucum is very high. Most of the host plants are those which occur in shades.

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Table-1 :- Showing Host, Fungi, Severity Occerence

No.	Host	Fungi	Severity	Occerence
1.	Aegle marmelos L	Trimmatostroma Marmelosae	Medium	Jan to April
2.	Carissa spina rum L	Sarcinella sp.	Medium	Nov to April
3.	Celastrus sp	Sarcinella sp.	Light	Oct to April
4.	Elaedodendron glaucum pers	Humicola grisea Traen	Very High	Oct to March
5.	Elaeodendron glaucum	Sarcinella sp	Medium	Nov. to March
6.	Marsdenia tenacissima	Sarcinella sp.	Medium	Nov to Feb
7.	Terminalia arjuna Bedd.	Vouayxelealla sp.	Medium	Oct to Feb
8.	Terminalia tomentosa	Vouauxiella sp.	High	Oct to Feb
9.	Vitex nugundo I	Sarcinella Jabalpurensis Rajak and Soni	High	Oct to March
10.	Ziziphus zuzuba Lam.	Mittericella ziziphina syd.	High	Nov. to March

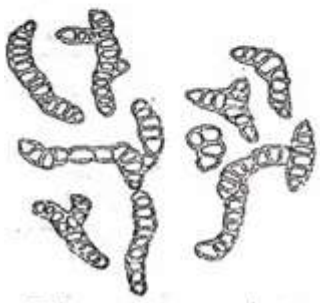
IV. CONCLUSION –

The finding of this study revealed that sooty mold fungi are non pathogenic but they cause major loss in plant qualitatively as well as quantitatively. In present investigation, the plants were selected are of medicinal value so management strategies are also be needed. Some Management strategies are as under –

1. Sooty mold may be washed off from plants but unless the causal insect are controlled, it may reappear to prevent sooty mold, you need to manage the insect.
2. Trees and shrub should be observed frequently during the growing season for honeydew and insect.
3. Remember look for insects not only on affected plants but on overstory plants as well for evidence of an infestation when sooty mold appears.
4. At the first sign of aphids, mealy bugs or white flies an appropriately registered insecticides may be used.
5. For commercial applications, please refer to the appropriate commercial pest management guidelines or contact your local co-operative extension office for more information on currently registered products.

Leaf Spot of Aegle mormilos caused by Trimmatostroma marmelosae

Closeup of lesion



Trimmatostroma marmelosae

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