

Plant Diseases: A Major Threat to Plant Life

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EDITORIAL

Plant diseases have a long history, as diseases like mildews, rusts, and blights, are mentioned even in the Bible. Fossils have depicted that plant diseases are a minimum of 250 million years old. Late blight of potato in Ireland, coffee rust in Sri Lanka and Panama disease in Central America are a few of the cases which cause drought in the nation due to the disease affecting the plants.

Plants, much like all the living beings on the earth are affected by some kind of external agents that interfere with their biochemical pathways in the body resulting in physiological impairments. The whole kingdom of plant diseases is subdivided mainly into two subgroups: infectious and non-infectious disease. The occurrence of infectious disease occurs when plants are affected by pathogens like virus, bacteria, fungus, mycoplasma, viroid, parasitic and nematoid. Non-infectious diseases of the plant are mainly caused due to unsuitable climate and weather, improper soil for plant growth, absence of required minerals, and imbalance of moisture and oxygen in the atmosphere. The only major difference between both modes of disease is the capacity to transmit the disease. Infectious diseases are caused by living organisms and hence they can transmit easily and are termed as infectious whereas non-infectious diseases do not possess such capability maybe because they are caused by

the harshness of natural conditions and not through any living organism.

Infectious disease of the plant occurs mainly through three stages. First, the inoculation stage, when the pathogens attack the host and perform the task of invasion. Second, the process of incubation can be defined as the resting stage or the time gap between the onset of the disease and the symptom shown. The third, is the infection stage in this stage symptoms are shown by the body as the infection starts to spread.

On the other hand, environmental stresses in form of temperature, pressure, relative humidity, soil pH, and soil type affect the tendency of the plant to be affected by a disease. As each disease-causing agent has an optimum temperature, relative humidity in which it can function the best. Soil pH and soil moisture contribute a lot to the development of particular root rot diseases.

Thus, it can be concluded that plant diseases have been a continuous challenge for mankind. Despite the development of pesticides and herbicides, preventing diseases of plants has been difficult and needs more research. Infectious and non-infectious diseases both are a major player against science and need to be tackled properly. The time may not be far when the society is going to observe epiphytotic in plants; hence a steady study with logical research is the need of the moment.

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Received: March 24, 2021; **Accepted:** March 27, 2021; **Published:** March 31, 2021

Citation: Upayan G (2021) Plant Diseases: A Major Threat to Plant Life. *J Plant Pathol Microbiol.* 12:545.

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