

Forest Diseases and Their Importance

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- **Disease is characterized by abnormal physiology occasioned by an extended interaction between a plant and a stress factor which is mostly a biotic entity.**
- **In other words disease is a disturbance in the normal physiologic functioning of a plant, has many causes, and exhibits an array of appearances and results.**
- **A simple dictionary meaning of disease is “any departure from health, presenting marked symptoms, malady, illness, disorders”.**
- **Mostly diseases caused by biotic agents (pathogens viruses, bacteria, fungi, nematodes, etc.) are called biotic plant diseases or infectious diseases.**
- **Whereas diseases caused by abiotic (non-living) agents such as extremes of temperatures, excess or deficiency of moisture, nutritional imbalance, phytotoxic gases, etc. are called abiotic plant diseases or non-infectious diseases.**

Health and Hygiene of Forests

- **To maintain the current status of the forests and increase the forest cover - a big challenge before a country and needs initiatives not only from the government but also from the users.**
- **The biggest threats to the existing forests are human needs and greed which are responsible for dwindling forest resources.**
- **Related with the existence and growth of the forests are issues of health and hygiene of our forests.**
- **While health is concerned with well being and proper growth condition and form of the plants, forest hygiene involves principles and practice of health and cleanliness.**

- **Technically speaking health and hygiene both are interrelated issues. According to 'Glossary of Forestry Commission' operational disciplines aimed at reducing the potential levels of forest pests and diseases are brought under forest hygiene, which holds true for forest health as well.**
- **Thus Forest Entomology and Forest Pathology become the essential disciplines of forest hygiene.**
- **Ideally a rejuvenating self-sustaining forest, free from pests including diseases, insect pests, rodents and weeds, would be considered healthy.**
- **In practice a forest where the pests are below a threshold limit would be considered as healthy.**
- **The major threats faced by forests : diseases, insect pests, weeds, fire, grazing, lianas and climbers, epiphytes, improper lopping and abiotic causes (temperature, moisture, nutrients, floods, hailstones, surface run off, etc.)**

- **Diseases are known to be one of the most destructive agents affecting the planting stock in nurseries and consequently the plantation yield thus directly affecting the forest productivity.**
- **Any failure in plantations, in the form of partial or total death of trees or when the expected growth rate is not achieved, is bound to hamper the anticipated ecological and environmental benefits.**
- **Sometimes diseases are not the primary cause but are the contributing factors, which attack the weakened plants after they are predisposed by various environmental, edaphic and biotic factors.**
- **It is estimated that of all the damages caused to forest crops, diseases attribute nearly 45 percent.**

- **The problems of forest plant health are not uniform starting from the stages of seeds, seedlings, plantations and after harvesting.**
- **Losses begin with seed abortion and deterioration directly affecting the germinability of seeds and the survival of seedlings.**
- **Root pathogens and borers kill plants or decrease their growth.**
- **Bark and cambial parasites and insect feeding can girdle and kill branches/ trees or produce lesions that lead to decay.**
- **Wood discolouring, decaying and borer holes decrease the merchantability of wood.**
- **Foliage diseases and insect pests decrease the amenity value of plants, decrease their growth and vigour and often lead to mortality.**
- **During storage and use fungal and insect attack deteriorates quality and quantity of forest produce and also adds toxic substances making it unsuitable for human consumption.**



***EVERY ENDING
IS REALLY JUST A
NEW BEGINNING***