

*WELCOME*

**S.RIYA**

**13PGB09**

# Classification of plant diseases

**On the basis of extent to which  
plant diseases associated with  
plant**

**1. Localized**

**2. Systemic**

# Localized Diseases

**They are limited to a definite area of varying extents of an organ , or only to a particular part of the plant**



# Systemic Diseases:

- Pathogen spreads throughout the entire plant –they are associated with almost every stage of plant's life cycle

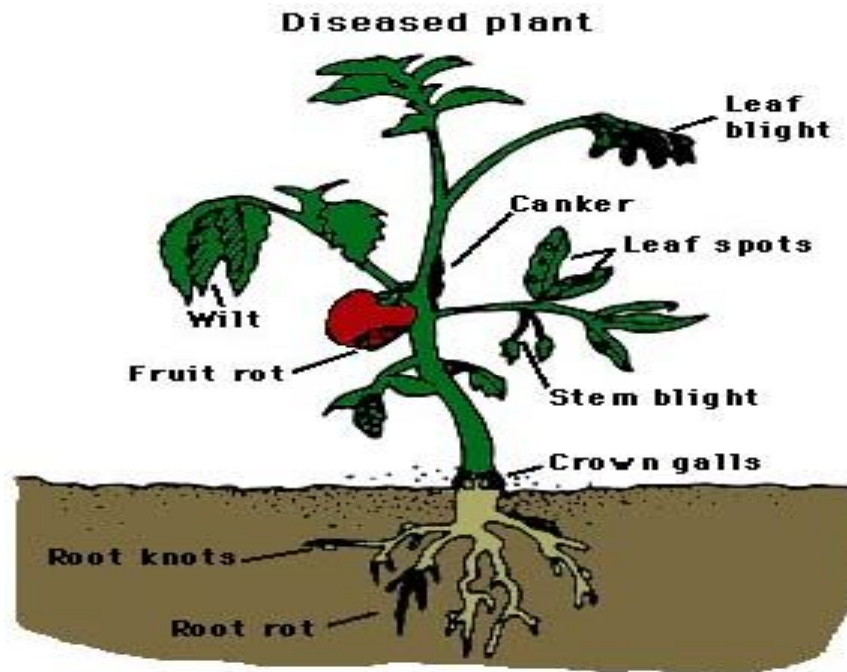


Fig. 1. Possible disease symptoms on plants.

On the basis of natural perpetuation  
and mode of infection

1. **Soil borne**

2. **Air borne**

3. **Seed born**

# **Soil borne Diseases:**

- **Pathogens causing diseases like pre-emergence killing ; damping off of seedlings , blight (pythium,fusarium)**
- **These soil borne pathogens survive in soil either as their resting spores or as mycelial strands and rhizomorphs**

# Soil borne disease





# Airborne Diseases:

- Some pathogens infect the host plant through air and bring primary as well as secondary infection
- Fungi as rusts , and mildews develop their thick walled spores

# AIR BORNE DISEASE



# **Seed borne Diseases**

- **Some pathogens survive as dormant mycelium in the seeds or other propagative structures of host plants. Many smuts and other fungi belong to this category**

# SEED BORNE DISEASE



# The basis of symptoms

*Rusts*

*Smuts*

*Mildews*

*Blight*

*Leaf spot*

*Cankers*

# Rusts:

- **Pustules or eruptions with light yellow to reddish or black , powdery masses of spores**
- **EG: snapdragon**
- 



# Smuts:

- **Galls or blisters that contain dark , almost black masses of spores .**
- **EG: common smut of corn**





# Mildews:

- **A thin coating of fungal growth on surface of infected plant part.**
- **EG: powdery mildew of rose**





# Blight:

- **Severe and extensive wilting or death of leaves , stems , flowers , or the entire plant**

**EG: late blight of potato; fire blight of apple**

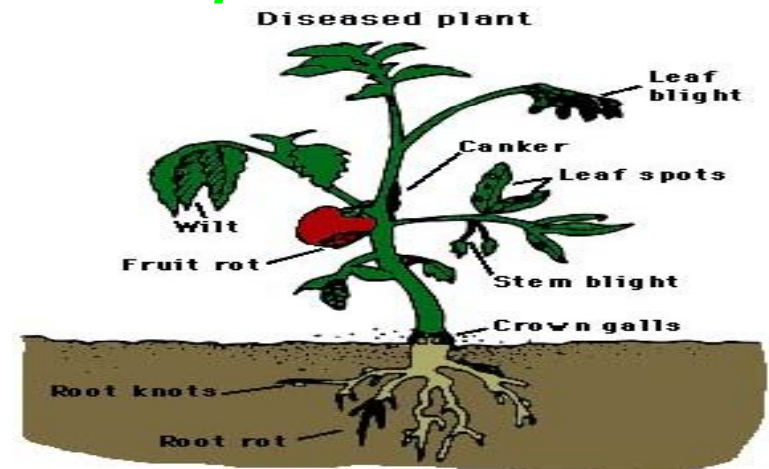


Fig. 1. Possible disease symptoms on plants.

# Leaf spot:

- **Limited yellowish or dead areas , usually of characteristic shape , size of appearance , on leaves and other parts**
- **EG: Apricot leaf spot**



# Cankers:

- **A sharply delimited ,  
often slightly sunken , dead area  
on the stem**
- **EG:**
- **Rhizoctonia canker on potato**

# ON THE BASIS OF OCCURRENCE AND DISTRIBUTION:

- **Endemic:**

**when a diseases more or less constantly present from year in a moderate to severe form in a particular country**

EG:

**wart diseases of potato**

- **Epidemic or epiphytotic:**

**A diseases occurring periodically but in a severe form involving major area of the crop it may be constantly present in locality but assume severe form occasionally.**

EG:

**Rust, late blight, mildews**

On the basis of cause

**Infectious(Biotic)**

**Non-infectious(Abiotic)**

## **Infectious diseases:**

A pathogen which is a living organisms cause diseases in plants.

**A) Diseases caused by fungi**

**B) Diseases caused by bacteria**

**C) Diseases caused by viruses**

**D) Diseases caused by nematodes**

# Non infectious diseases:

**They are physiological disorders.  
They don't spread from plant to plant.**

**These are caused due to improper  
conditions of soil , air.**

**EG:**

Black heart of potato , tip burn of paddy

# **The non-infectious diseases can be divided into:**

- **Unfavorable(too low or high) temperature**
- **Lack or excess moisture**
- **Lack of aeration**
- **Air pollution**
- **Nutrient deficiencies**
- **Mineral toxicities**
- **Unfavorable soil pH(too low or high)**



**THANK YOU**

