

MAJOR DISEASES

DETECTING WITH VISUAL
INSPECTION



PURPOSE:

- **Prevention of spread: Early identification helps prevent spread of disease to other plants.**
- **Improved Crop Management: Allows for timely intervention and management practices.**
- **Enhanced Yield: Reduces losses and maintains crop productivity.**

Benefits of Visual Inspection:

- **Cost-Effective:** Reduces the need for expensive diagnostic tests and treatments.
- **Immediate Response:** Enables quick response to emerging problems.
- **Non-Invasive:** Allows for the assessment of plants without disrupting their environment.

Challenges in Visual Diagnosis:

- **Symptom Overlap:** Many diseases present with similar symptoms, making accurate identification challenging.
- **Environmental Factors:** Symptoms can vary based on weather conditions and soil health.
- **Skill Development:** Accurate diagnosis requires experience and knowledge.

Slide 3: General Symptoms to Look For

- **Leaf Discoloration: Yellowing, browning, and spotting.**
- **Leaf and Stem Deformities: Curling, distortion, and wilting.**
- **Surface Deposits: Powdery, fuzzy, or moldy coatings.**
- **Growth Abnormalities: Stunted growth, galls, and knots.**

Slide 4: Fungal Diseases

Powdery Mildew

- Symptoms: White, powdery coating on leaves and stems.
- Crops Affected: Cucumbers, grapes, squash.

Rusts

- Symptoms: Reddish-brown pustules on leaves and stems.
- Crops Affected: Wheat, coffee.

Bacterial Diseases

Bacterial Wilt

- Symptoms: Wilting and yellowing of leaves.

- Crops Affected: Tomatoes, cucumbers.

Bacterial Blight

- Symptoms: Water-soaked lesions on leaves and stems.

- Crops Affected: Beans, rice.

Viral Diseases

- Tobacco Mosaic Virus (TMV).
 - Symptoms: Mottling and distortion of leaves.
 - Crops Affected: Tomatoes, peppers.
- Cucumber Mosaic Virus (CMV).
 - Symptoms: Mosaic patterns on leaves, stunted growth.
 - Crops Affected: Cucumbers, peppers.

Nematode Diseases

Root-Knot Nematodes

- - Symptoms: Galls or knots on roots, stunted growth.
 - Crops Affected: Tomatoes, peppers.

Cyst Nematodes

- - Symptoms: Cysts on roots, impaired water and nutrient uptake.
 - Crops Affected: Soybeans, potatoes.

Other Diseases

Fusarium Wilt

- - **Symptoms: Wilting, yellowing of leaves, vascular discoloration.**
 - **Crops Affected: Bananas, cotton.**

Sclerotinia Rot

- - **Symptoms: Soft, water-soaked lesions on stems and leaves.**
 - **Crops Affected: Soybeans, sunflowers.**

