

PENETRATION OF INOCULUM

- Pathogens enter a host through **natural openings**, **wounds on plant surfaces**, or by **penetrating directly** into the plant
- **Penetration** - The process by which the pathogen enter its host.
- Penetration varies in different pathogens.
- The penetration process is divided into
 - Pre-penetration process
 - Penetration
 - Post penetration process

SPREAD OF INOCULUM

1. Plant placed in soil that contains a pathogen
 2. Inoculum moves from its SOURCE to host plant
- Sources of Inoculum:
 - Infected plant parts: Seed, cuttings, bulbs, corms, tubers etc.
 - Diseased plant debris
 - Alternate hosts
 - Collateral hosts:

ARRIVAL AND LANDING OF INOCULUM

- Inoculum is carried by different agencies like,
 - Wind: powdery & downy mildews, rusts
 - Water: bacteria, *Colletotrichum* spp., *Fusarium*
 - Soil: *Rhizoctonia*, bacteria, *Sclerotinia*
 - Insect vectors: viruses- Potato virus Y by aphid: *Myzus persicae*
 - planting material: viruses: BCMV, TMV
 - Tools: TMV, bacteria, fungi,
- Some pathogens may also use their own force to reach host e.g. nematode larvae, zoospores