

# PRE-PENETRATION PROCESS

- **Attachment of the pathogen to the host**

- Some of the pathogens like viruses, phytoplasma, viroid, RLOs etc are directly placed inside their host by different agencies
- Almost all fungi, bacteria, parasitic plants, nematodes, first come in contact with the host surface and must get attached to the external surface
- This is done through some kind of adhesive material present on the propagules surface consisting of water soluble polysaccharides, glycoproteins, lipids or fibrillary material.
- Presence of moisture on host surface helps attachment.
- Exact mechanism of adhesions of the spores is not known, however,
  - there may be some specific interaction of the spores with host surface via lectins, ionic interaction or hydrophobic contact with the plant cuticle.
  - studies have shown that many proteins of the fungal cell wall play an important role in the adhesion of the fungi, as well as in the host surface perception by the fungus.



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- Spore Germination
- In fungi, spores of different fungi germinate according to the nature of spores:
  - Resting spores: (e.g. *asexual*: sclerotia , chlamydiospores or *sexual*: oospores, ascospores, teliospores)
  - Propagating spores: e.g. zoospores, conidia.
- Some spores germinate immediately like conidia, ascospores. Others need some resting period after formation (dormancy) for their maturation e.g. sclerotia, teliospore, oospores.