

# SECONDARY CYCLES

- Some diseases have only one cycle during the growing season (often root rots)
- Some diseases develop secondary or repeating cycles during the growing season (often foliar diseases)
- Number of cycles depends on the pathogen, susceptibility of the host, and environmental conditions





# PATHOGEN SURVIVAL

- Pathogen survival / Overwintering or Overseasoning: is the ability of a pathogen to survive from one growing season to the next.
- Pathogens survive season to season in:
  - Growing plants
  - Soil
  - Seed or propagating (vegetative) plant parts
  - Crop residue
  - Alternate host
  - Collateral host: weed or non-crop host
  - Insects