

Laboratory 9 Study Guide (video: 1 hour 3 minutes)

Study Questions

1. Compare and contrast the mechanics of infection by downy and powdery mildews.
2. What are powdery mildew haustoria and how do they contribute to the process of causing disease?
3. What are cleistothecia and how do they enhance the survival of powdery mildews in temperate climates?
4. Almost all powdery mildews found in tropical climates are known by the generic name of *Oidium*. Why?
5. How was Bordeaux mixture discovered? Also, Downy mildew was not a problem in Europe until about the 18th century. Why not?
6. What are some of the general characteristics of downy mildews with respect to a) host range, b) parasitism (facultative or obligate), and c) types of damage induced by each?
7. What are sooty molds and what is the best ways to control them?
8. What is honeydew, and how does this relate to damage by sooty molds? Are sooty molds parasitic?
9. Disease forecasting (used to control potato late blight) is of no concern when dealing with the powdery mildews. Why not?
10. What is the main difference between downy and powdery mildews with respect to freestanding moisture and germination?

Key Words

Appendages
Ascomycete
Bordeaux mixture
Cleistothecium (-ia)
Coenocytic hypha
Conidium (-ia)
Disease forecasting
Downy mildew
Eradicative sprays (for powdery mildews)
Haustorium (-ia)
Honeydew
Obligate parasites (downy and powdery mildews)
Oidium spp.
Oomycete
Oospore
Phyllactinia
Phytophthora infestans
Plasmopara viticola (downy mildew of grapes)
Powdery mildew
Protective spray (for downy mildews)
Septate hypha

Sooty mold
Sporangium (-ia)
Sporangiophore