

Lecture 12 Study Guide (video: 1 hour 1 minute)

Study Questions

1. Four general terms define general approaches for controlling plant diseases. List and define each.
2. Quarantines were established for citrus canker, coconut lethal yellowing, chestnut blight, and Dutch elm diseases. Were these measures successful, and if not, why?
3. "Pathogen avoidance" can be helpful in the production of certified seed. Explain, and give some examples.
4. What is "cross protection" and how does this work with viruses such as papaya ringspot? What are some limitations of this approach?
5. Are organic sulfur fungicides, such as Ferbam and Zineb most effective against bacteria, fungi, or oomycetes? How about antibiotics or copper fungicides, such as Metalaxyl?
6. What are some of the problems confronting those trying to enforce quarantine regulations? People trying to introduce potted plants are likely to have their plants confiscated. Why?
7. List several specific examples of "biological eradication" types of control.
8. Methyl bromide fumigation and solarization can be effective soil eradicators, but each has their limitations. What are they?
9. Powdery mildews are especially vulnerable to eradication by sulfur-containing fungicides. Why?
10. What are "stylet oils" and how are they used to control aphid-borne viruses? Do stylet oils kill aphids or simply retard the spread of these viruses?

Key Words

Avoidance
Benomyl (Benlate)
Captan
Carbamates (Temik, Furadan)
Cross protection
Chestnut blight
Citrus canker (A strain)
Coconut lethal yellowing
Conducive soils
Copper fungicides (include. Metalaxyl, Bordeaux mixture)
Dutch elm disease
Eradication
Exclusion
Fumigation (methyl bromide) Karnal bunt
Halogenated hydrocarbons (e.g. methyl bromide)
Hot water treatments
Lasso fungus (nematode biocontrol)
Mercury

Metalaxyl
Organic phosphates
Protection (malathion, parathion)
Quarantine Act (1912)
Resistance
Roguing
Sanitation
Soil sterilization
Solarization
Stylet oils (to control aphid-borne potyviruses)
Sulfur fungicides (incl. Ferbam, Maneb, Zineb)
Suppressive soils
Systemic pesticides (e.g. Metalaxyl)
Tolerance
Trap crops