

**DIAGNOSING
INFECTIOUS AND
NONINFECTIOUS
PLANT DISEASES**

**Master Gardeners
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Identify the host plant
Scientific name, variety, cultivar
Living organisms have limited hosts

How does a healthy plant look?
Size, color, characteristics
Compare "sick" with healthy plant

Does the plant have an infectious or noninfectious disease?

- INFECTIOUS
DISEASE SYMPTOMS:**
1. appear gradually, in definite stages.
 2. on plants in an area may vary in extent of disease.
 3. tend to be complex.
 4. have lesion borders that expand, with complex, graded or zonate centers or margins.
 5. are variable in type, pattern, occurrence, but all have a unique, common character.
 6. are not limited to tips, margins.
 7. may also include signs.
 8. occur over time, related to environmental conditions.
 9. may include selective distortion (e.g. leaves only affected).
 10. may only affect certain plant species.
 11. are usually on plants that are irregularly distributed.

- NONINFECTIOUS
DISEASE SYMPTOMS:**
1. usually appear suddenly, in their full intensity.
 2. tend to affect all plants in area to a similar extent or way.
 3. are not complex, often point to obvious causal agent.
 4. have sharp, nonexpanding lesion borders with an abrupt change from healthy to diseased tissue.
 5. are highly regular, uniform.
 6. have necrotic leaf tips, margins, other stress-related patterns.
 7. do not include signs.
 8. intermittent, follow an event.
 9. may include gross distortion and can affect the whole plant.
 10. can affect many plant species.
 11. are usually on plants that are fairly regularly distributed in field or clustered in an affected area with no apparent spread.

SIGN OF THE PROBLEM
Fungi (mycelium, fruiting bodies); Bacteria (ooze);
Insects (eggs, larvae, molt, frass); Weeds, Rats,
Snails, Birds; other visible plant pests.

FOR AN INFECTIOUS DISEASE:
identify the disease by its symptoms.
identify the organism by its sign.
determine if the organism is found in Hawaii.
link organism, host, symptoms, in references.

FOR A NONINFECTIOUS DISEASE:
identify the cause by its sign, if present.
identify conditions before and at onset.
are the environment/and symptoms related?
link symptoms and conditions in references.