Plant Diagnostics

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Handouts

- Diagnostic key
- Tips for Diagnosing Plant Problems caused by Insects and Mites
- Plant Disease Diagnosis
- Presentation Outline



Introduction

- Assume all of you have some experience in diagnosing plant problems
 - Today's training is to make you all better detectives





How are we going to do that? The Plan How does Sherlock approach a problem?

- We will take you through the deductive process
- "Hands on Plant diagnosis"
- Where to find information
- Solve the problem





Diagnostic Process Sherlock style



Observation

- Sherlock stressed not pre-judging a situation before the facts have been observed and gathered (questions)
- Analysis
 - the more angles you observe a problem from, the more facts you have gathered about it, the more likely you are to be able to see the final solution
- Search
 - "The solution lies in the details....magnifying glass in hand, eyes sharply focused for clues."



The Plant Detective:

An observer of symptoms and questioner.

Just like a detective looks for clues, that is what you do when you are diagnosing plant problems.





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Diagnostics Where do we start?

- Gather background information
 - We question the client

*Getting good information means having good "bedside manner". The client needs to know that you are interested in their problem and solving it!



What do we ask?

- **Plant ID**, age and size
 - Know what the "normal" plant looks like •
- Environment
 - Weather
 - **Exposure**
 - Water
- **Location of the plant**
 - Soil type; is it in a lawn?, landscape? orchard? foothills vs valley? ۲
- **Symptoms**
 - What do you see? ۲
 - Plant parts affected (leaves, stems, roots etc.) ٠
 - Degree of symptom expression (whole plant etc.) •



Diagnostic Skills

Approaching the problem to diagnose the cause

 When a plant is subjected to unfavorable growing conditions compared to plants growing under more normal conditions, certain SYMPTOMS become evident.



This is what will prompt the homeowner to call you



Observation



Symptoms Describe what you see



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NARROWING DOWN THE PROBLEM (START BIG AND GET SMALL)





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Systemic (Fire blight)







SIGN

SYMPTOM



























"The solution lies in the details.....magnifying glass in hand, eyes sharply focused for clues..... use scopes, lens, glass"

- Look for clues
 - Signs of fungi
 - Insects
 - Insect byproducts



What do you need know?

- What diseases and insects are most common on the host plant
- The diseases and insects most prevalent in your area (experience) and factors affecting their development





Search References



Pests of Landscape Trees and Shrubs An Integrated Pest Management Guide THIRD EDITION





- UCANR Abiotic Disorders of Landscape **Plants -** A Diagnostic Guide
 - Westcott's Plant Disease Handbook







- UC IPM Website
 - Managing Home Garden Pests
 - http://ipm.ucanr.edu/
- UC Davis Fruit and Nut Center
 - The Backyard Orchard
 - http://fruitsandnuts.ucdavis.edu
- ANR Catalog
 - Pest Notes, 8000 Series

 \diamond http://anrcatalog.ucdavis.edu/



Diagnosing problems like Sherlock

Takes Experience! Remember – don't bluff. Say "I don't know but will find out" Ask questions and use the clues!



Questions???



Thank you



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