ISA Diagnostic Workshop

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20 Questions of Plant Problem Diagnostics

1) What is the plant?
2) What is normal for the plant?
3) What are common or specific problems for the plant?
4) What do you see that looks abnormal?
5) What is the overall health of the plant?
6) What exactly do you see?
7) What do you see on other plants?
8) What is the site?
9) Who knows most about the plant?
10) When did the symptoms first appear?
11) What is the horticultural history
12) What is the environmental history?
13) What does the client think the problem is?
14) What diagnostic tools are useful?
15) What additional resources are available?
16) How do you take samples?
17) What else?
18) What is your diagnosis?
19) What is the significance of the problem?
20) What are your recommendations?

Know Thy Trees! Plant-Specific Questions

1) **What is the plant**?
2) **What is normal for the plant**?
3) **What are common or specific problems for the plant**?
4) **What do you see that looks abnormal**?
5) **What is the overall health of the plant**?

- ✓ An accurate diagnosis always starts with an accurate identification of the plant.
- ✓ Eliminates things that should be expected such as leaf variegation, natural senescence, etc.
- ✓ Knowing about the plant helps you to determine what looks abnormal including what a healthy plant should look like: What is the expected growth rate? What is the expected leaf color?
- ✓ Knowing which tree you're dealing with helps you to be aware of common problems associated with the plant; problems that may be associated with the family, genus, or species.

The First Reality Check; Question What You See:

6) **What exactly do you see**? This is a "reality check" question.

Step Back: Take a Look Around

7) **What do you see on other plants**? Look for the same or similar symptoms on other plants.
8) **What is the site**? Focuses your attention on site characteristics such as soil type, pH, etc.

Gather Information

9) **Who knows the most about the plants**? Plants can't talk: who can "speak for the trees?"
10) When did the symptoms first appear: establish the chronology of events.

What Has Happened in the Past?

11) **What is the horticultural history**? Is the plant the proper plant for the site (plant selection?). Was it installed correctly? What about "aftercare" such as fertilization, watering, pest/disease management?

12) **What is the environmental history**? Past rainfall, temperatures, etc.
13) **What does the client think the problem is**? It's an interview, not an interrogation! The goal is to gather information; avoid "leading" or accusatory questions such as, "Did you give the tree too much water?"

Expand Your Diagnostic Horizons:

14) **What diagnostic tools are available**? Think about developing a traveling "diagnostic tool kit."
15) **What additional resources are available**? Experience you can tap into: your colleagues, university personnel, clinics, etc. What about training events? What written materials are on hand? Websites?
16) **How do you take samples**? Sample quality directly affects the accuracy of diagnostic help!

Final Reality Check:

17) **What Else**? The second and final "reality check" before you declare a diagnosis: take your time and avoid making a "quick-draw" diagnosis!

The Moment of Truth; Putting it all Together:

18) **What is your diagnosis**? Rather than just declaring a diagnosis and leaving it at that; you should consider stating the "how" and "why" you arrived at your diagnosis. Just as important; you should list what you did not find, particularly if other things could produce similar symptoms.
19) **What is the significance of the problem**? Is the problem significant to the health of the plant, or just the aesthetics? Consider the clients expectations; avoid applying your own perspective / bias. Remember: everything is relative!
20) **What is your recommendation**? Consider the cost of your recommendation in terms of both dollars and "sense." Consider timing: when is the problem most effectively addressed? Your recommendation may be that the window of opportunity to correct the problem may have already closed!

The 21st Question: What if you are wrong?

- ✓ Whether the diagnosis was difficult, or a "slam dunk," always consider the possibility that you could have made an error. There is no shame in making a diagnostic error; we are human.
- ✓ "*An error doesn't become a mistake until you refuse to correct it*."-- Orlando A. Battista

The 22nd Question: Did you make a follow-up visit?

- ✓ Whether your diagnosis was for a "one time" customer, or a customer you've worked with for years, you should always check to see if your recommendation actually worked!
- ✓ Sometimes, follow-up visits are the best teachers; you may learn that you made an error in your diagnosis or you may learn that an "industry standard" recommendation doesn't work as advertised ... consider how long we all globed pruning paint on tree wounds!

The 23rd Question: What was it like to not know?

- ✓ Helps with educating your clients - what did you think about the problem before you knew the diagnosis to the problem?
- ✓ How did your diagnosis lead to other discoveries expanding your tree knowledge?