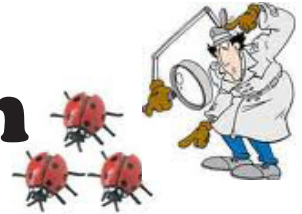


How to Conduct an IPM Scouting Expedition

Don Savard, CSFM, CGM



Let's suppose your facility follows an Integrated Pest Management (IPM) program and has in place a written an IPM policy. This policy which describes how the plan will be implemented, offers a guideline for what the thresholds are for insect populations, disease pressures, even damages such as traffic wear or drought stress. These thresholds might be based on economics (the cost of treatment vs. the cost of the pest damage) or aesthetics (when it looks bad enough). The document might even specify what control measures will be utilized or when and how they are to be implemented. Now it is your job to scout the landscape for pest problems. Where do you start?

The site survey and inventory.

Before you begin scouting, you must develop a site map showing prominent features such as buildings, pavement, turf areas, trees, and bodies of water. Indicate where North is and show how water drains on to and off the site. This map will help you see the big picture especially if you are trying to diagnose a problem that doesn't have any easy to find clues. All of the prominent features can have a direct or indirect effect on plant health. Shade, heat from pavements, and bodies of water all influence microclimates which have an effect on plant or pest viability.

Next, identify and list all of the plant materials on your site including those that have been installed and those growing naturally. Indicate their location on your map. Note the age and condition of the plant material. You really have to know what you are looking at, it's culture and especially know what healthy is supposed to look like. Obtain the square foot measurements for the turf, tree and planting areas as this information will be useful in case you must take some kind of corrective action. Begin to record the local weather conditions such as temperature, humidity, precipitation, wind speeds and cloud cover. Keep before and after pictures of your site for additional documentation.

What are you looking for?

You will be looking for abnormalities in the plant growth or health. If you know what healthy (for a particular plant) is supposed to look like, finding the abnormalities will become more apparent for the observant IPM scout. Abnormalities in plant health can be triggered by either (or a combination of) biotic or abiotic factors. A Biotic factor is any living component that affects another organism. Biotic causes of damage include insect (or other organism pests), bacterial, viral and fungal diseases. Abiotic factors are non-living chemical and physical components in the environment. This would include soil problems, weather related causes of damages (such as heat, cold, wind, sun, shade, drought and flooding), mechanical injury (such as traffic, wear, cultivation and other physical phenomenon).

How to scout for problems.

First, step back and consider the "big picture" of the site as a whole and observe whether or not it is well cared for and healthy or not. For every observation made, pose the question "why or why not". As you begin to examine the plant materials, look at its micro environment and be sure to examine the plants from all angles including both sides of the leaves. If you subscribe to a weekly IPM scouting publication offered by your local cooperative extension services, you can zero in on specific targets and pests for that time period. The idea is to move systematically and efficiently through the site. Record what you see. Because your IPM plan should include economic or aesthetic thresholds, your records will provide quantifiable data to support whether or not an action should be taken.

Don't be fooled!

The presence of insects does not necessarily indicate that there is a problem. In a balanced ecology, there is a place for all of the creatures, both predators and prey. When this delicate balance is disturbed plant health will eventually become compromised.

Are you sure that the insect that you observe is not a beneficial insect. For example, big eyed bugs (*Geocoris* spp.) are a beneficial predator often confused with the chinch bug (*Blissus* spp.), which is a pest in turf. Capture, identify and confirm that the moths flying over the turf in a zigzag pattern are indeed sod webworm adults laying eggs in the turf and not some benign flying insect.

Very often unhealthy looking turf and plant materials appear to have insect or disease damage when in fact the damage was of an abiotic cause. For example, the irregular off color patterns in turf may not be a fungal disease but rather an indication that an irrigation head might be functioning improperly. Finding the real source of the problem is your objective. Keep in mind that plants may not necessarily succumb because of just one cause of death, but often to secondary and tertiary causes. Keep an open mind and be observant!

Essential tools you will need for IPM investigation.

For examination:

- 10X Hand lens, (Binoculars for looking into trees)
- Flashlight
- Thermometers, (soil and ambient air)
- Measuring tape
- Sharp Knife and Pruning shears
- Soil probe, Spade or Trowel
- Bucket, Soil screen sieve

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Dr. Henry W. Indyk Graduate Fellowship in Turfgrass Science

As many of you know, the turfgrass industry lost a dear friend and colleague in September 2005. We will all miss Henry very much and would like to insure that his legacy lives on. The Indyk family would like to establish a memorial fellowship to support graduate students interested in applied turfgrass science. This fellowship is being created to help assure that tomorrow's graduate students have the financial resources to get an advanced degree in turfgrass science at Rutgers University. To fund a full graduate assistantship each year in Henry's name, we will need to raise a total of \$400,000. Your generous support at this time will bring us closer to reaching this goal.

To make a tax-deductible contribution today, please send a check payable to the Rutgers University Foundation, 7 College Avenue, New Brunswick, NJ 08901. Be sure to indicate "Indyk Fellowship, Turfgrass" in the memo portion of your check. If you desire, you may provide a donation in the form of a pledge payable over several years.

For information on other ways to support this fellowship, please contact

Dr. Bruce B. Clarke, Director – Rutgers Center for Turfgrass Science
(732) 932-9400, ext. 331; or clarke@aesop.rutgers.edu or

John Pearson, Director of Leadership Gifts at the Foundation, by calling
(732) 932-7899 or email: pearson@winants.rutgers.edu



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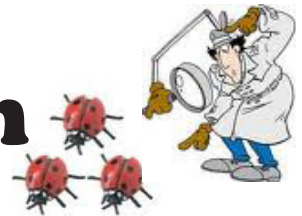
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For sample collection:

- Sweep net and shake cloth
- Traps
- Plastic specimen bags and bottles
- Sturdy cooler, Bubble wrap
- Rubbing alcohol for preservation and disinfection

For documentation:

- Camera and Notebook
- Portable voice recorder

For Reference Materials:

- Text books
- Field Guides
- Weekly IPM scouting reports from your local university Cooperative Extension Service.

Responsible stewardship is "the name of the game".

It is unlikely you would return to an automobile mechanic who made repairs on your car based on guess work rather than careful investigation and diagnosis of the problem. Skilled IPM practitioners who scout properly and follow their program protocols face fewer plant healthcare problems and manage their sites safely, cost effectively and with fewer inputs. At this point you will prepare a scouting report and compare your findings to your IPM Threshold Policy. This will influence the decision of what actions will be taken.

Don Savard is a Certified Sports Field Manager (CSFM), Certified Grounds Manager (CGM); Grounds and Athletic Facilities Manager, Salesianum School; and SFMANJ President