

Educate to Detect:

First Detector Training in Florida & Polycom Training

Milton, Immokalee, Homestead & Gainesville (*Live presentation*)

Friday, May 2, 2008

Hands on DDIS Demonstration by Jim DeValerio (*Bradford County Extension*)

Tips for Scouting for and Collecting New Specimens

One purpose of the DDIS system is to detect the emergence of new exotic pests in Florida. Collecting new specimens requires an open mind and the efforts of anyone who works in the field including extension agents, farmers, ranchers, nurserymen, landscape professionals and other individuals who work in related fields.

To increase your chances of detecting a new pest:

- Study to become familiar with pests normally associated in cropping system or ecosystem.
- Be familiar with or be able to differentiate between native, naturalized and potentially exotic pests.
- Be open to making collections in unlikely scenarios. (Since we are looking for “new” pests, the target host / niche the pest occupies is unknown).

Make a kit to be prepared to make collections. Some items to include:

- Assorted plastic and paper bags in sizes suitable to hold a variety of substrates including soil samples, whole plants with intact root systems, branches, etc.
- Insect collection jar.
- Permanent markers, pencils and labels.
- Maps and/or GPS unit so you can correctly label the location.
- Tools (knife, saw, shovel, machete, ax).
- Clear packing tape & ties for bags.
- First aid kit, hat, sunscreen, insect repellent.
- Reference materials.
- Flashlight.
- Cooler to keep samples cool.
- Rubber boots.
- 10 X Magnifying glass.
- Ruler.
- Digital camera.

Scouting tips:

- Always observe the entire circumstance. Record observations about the entire sampling experience. If the suspected pest appears likely to escape, secure it first, being careful to collect many “good” representative samples that include any and all sample variations present.
- Survey the entire area within the crop and note frequency of occurrence and/or the level of damage the pest has caused. You may decide to take more samples after the area survey.
- Look to adjacent areas to see if the pest is occupying off site hosts. Does it move from a crop host? Does it seem to favor one plant family? Example: an insect on tomato that is observed on other solanaceous plants?
- Remember, symptoms expressed on a plant caused by insects or diseases may be the result of the pest’s activity on another portion of the plant. (i.e., wilts may be caused by root pests, not something disrupting vascular translocation in the stem).
- Perform on site dissection of plants if necessary to find causal agent signs.

Final comments:

Be prepared to look beyond the expected. Many new finds are found when pest problems arise and you are called to investigate. Other times, you will make observations of circumstances that are not ordinary. Do not be so busy that you do not sample something that you do not recognize. Tropical soda apple (*Solanum viarum*) was observed around cattle feed lots for two years before it was collected, identified and recognized as being invasive. It might not have been obvious that it was invasive but the plant’s spread may have been checked had the local community realized that what was popping up everywhere was a newly introduced species to Florida.