Scouting

One of the basic foundations of Integrated Pest Management is the detection of a potential pest or the observation of a cultural problem before it becomes serious. This means scouting. Unfortunately, many nursery managers consider IPM scouting a normal part of every nursery worker's job, and it isn't done systematically and comprehensively. Yes, it's true that the entire nursery crew should be alert to possible problems during their normal duties. The problem with this approach is that the crew doesn't always get out among the seedlings on a regular basis, and there is always the tendency to assume that someone else is going to mention a problem. Pests don't work normal 8 to 5 hours, so it is important to look for pests early or late in the day, or even at night. For example, black vine weevils are nocturnal, and are rarely seen during the day, so an IPM scout may have to occasionally stop by the nursery at night to check.

So, it's a good idea to assign the responsibility of scouting for pests and cultural problems. This will insure that the job gets done regularly, and that the information will be permanently recorded in the nursery logbook or computer. And, although we are all equal in God's eyes, some people have unique abilities that make them better IPM scouts than others. The attributes of a good IPM scout include a knowledge of nursery practices and crop development, good eyesight, an inquisitive attitude, attention to detail, and patience. Often, the person who monitors seedlings growth and development, and inventory, makes a good scout because they are around the seedlings often enough to notice when something just doesn't look right.

Scouting tools include a hand lens, binocular scope (Figure 6), camera with close-up lens, notebook, and computer record keeping system. IPM scouts should also have access to a good library of books that identify and describe nursery pests and other cultural problems. Good record-keeping is essential; scouts should keep a daily log in a notebook, or record their observations on a standardized record form on a computer. Pest thresholds will vary from nursery to nursery, and this observational information is essential to developing them for your own situation.

Scouting Techniques

There are some relatively simple tricks of the trade that make scouting more effective:

* ***Sticky cards***—Yellow and blue sticky cards are an inexpensive, but effective, way to keep track of flying insects pests like aphids, fungus gnats, and thrips. Yellow works well for most critters but thrips are more attracted to blue.
* ***Indicator plants***—Some plants are just more attractive to pests, or sensitive to environmental stresses than the crop seedlings. For example, bigtree redwood *(Sequiadendron giganteum) is* extremely sensitive to the fungus *Botrytis cinerea,* so some growers place a few seedlings of this species amongst their crop, and monitor them closely. When they see the first signs of the fungus, it's time to spray protective fungicides.
* ***Sequential sampling***—A new, more-efficient method of IPM scouting has been developed for whiteflies in poinsettias but could be modified for any large crop. The technique consists of inspecting plants in a pre-determined sequence until you can make the determination of whether the problem has reached the critical threshold. Sequential sampling requires specific data on the relationship between the number of pests per plant and damage caused, so it would only be applicable after the basic relationships between pest levels and damage have been established. See Sanderson and others (1994) for specific details.

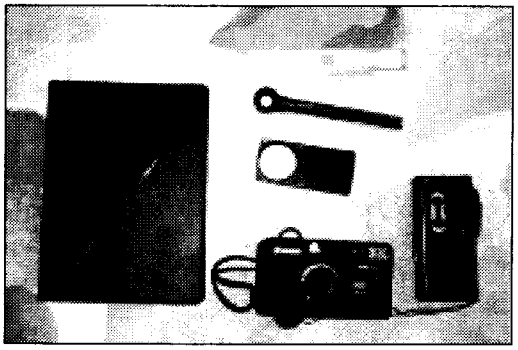

Figure 6. Scouting is an essential part of an Integrated Pest Management Program and requires some specific tools.

The scope and intensity of IPM scouting must be determined by the size and complexity of the nursery, so don't let techniques or procedures deter you. The important thing is to just get out there, start scouting, and recording some observations.

Sources:

Cuny, H. Why aren't you scouting? Greenhouse Management & Production 14(1): 24-26.

Sanderson, J.; Davis, P.; Ferrentino, R. 1994. A better, easier way to sample for whiteflies on poinsettias. Greenhouse Manager 13(6): 71, 73-76.