IPM, biologicals now partners in pest control

■ Integrated pest management (IPM) programs have become a way of life for many green industry professionals seeking to modify the way they care for turf and ornamentals.

And IPM practitioners await the day when biological controls can be fully incorporated into their existing chemical control programs.

It's been around for years, but for the uninformed, IPM involves the carefully managed use of three different pest control tactics—biological, cultural and chemical—to get the best long-term results with the least disruption of the environment.

Dr. Pat Cobb, entomologist at Auburn University, likes to think IPM stands for "Intelligent Plant Management."

Cobb told attendees at the annual Lofts Seed Field Day in Bound Brook, N.J. this summer that the proper IPM program consists of proper management, monitoring, threshold setting, timely controls and evaluation. "The 'when' is more important than the 'what you do,' she noted. "IPM starts with putting a plant in the right place, and that means plant selection for the site selection."

Susan Barton, horticulture specialist with the University of Delaware Cooperative Extension, prefers the name 'Plant Health Care' (PHC), and is applying it to urban environments. She believes PHC is a more accurate label, and wants the attention taken away from the pest and focused on the health of the plant.

"Instead of one crop and several pests, you have hundreds of different plants, each with many potential pest problems," says Barton. "But by focusing on healthy plants, and periodically scouting for pests, it can be done."

The Delaware Extension "Plant Health Care" program selects appropriate plants for each site, and well-timed maintenance practices, including fertilization, watering, pruning and pest control.

One of the things the "keepers of the green" should be concerned with is insect identification, first and foremost. "Be sure you know the insect and whether it's a pest or a beneficial insect," says Cobb. "You don't want to wipe out the good guys."

Developments in bio-technology show some application in the turf and ornamental care areas, she notes. "Some of the citrus products (oils) promise control for fire ants."

Other points Cobb thinks are important when trying an IPM program:

- Use area mapping to treat only the problem site.
- Sell a "service," not a "spraying program."
- Proper communication with customers is critical to their accepting or turning down an IPM approach. Explain the concept in simple terms, and stress the benefits.

Several copanies operating in Maryland have adopted an IPM program in tandem with their conventional spray programs. This way, customers are offered a chioice of either IPM or cover sprays. Both programs are of equal cost.

Here are the steps necessary to work IPM into your landscape pest control program:

1. Hire one person with an in-depth knowledge of ornamental insect and disease management. The ideal place to obtain such a candidate is from your state land grant university, if it has an IPM training program.

Be sure the person you hire is able to recognize beneficial insects. It is preferable to hire someone who has been trained in the methodology of IPM if the program is to work for you company. The manager must be familiar with beneficial insects, cultural and mechanical controls, biorational pesticides, and pesticides.

2. Define the type of customer you wish to work with. Different landscapes require different time commitments for a monitoring program.

The average half-acre residential landscape takes 30 to 40 minutes for a thorough inspection in the spring, and 15 to 20 minutes by midsumer, when fewer pests are active.

3. Decide on how many customers you can handle. One good scout supervisor should be able to handle 40 to 50 half-acre residential homes per season.

4. Contact your local extension service for help. Extension agents in urban agriculture are experts in plant diagnosis.

5. Decide on a price for you service. Most companies presently using IPM are charging the same amount charged for cover sprays. Determine the frequency of seasonal monitoring and the time required, then add your profit margin.

6. Advertise your IPM program, and stress its benefits. Let your regular customers know they have a choice of programs.

7. Read as much as you can about IPM and the different approaches being used.

EPA grants exemption to Ecogen's Bt research

■ Ecogen, Inc. announced recently that it has received clearance from the Environmental Protection Agency (EPA) to evaluate recombinant strains of *Bacillus thuringiensis* (Bt) in small-scale field trials without prior notification or seeking an experimental use permit before testing each strain.

Under the generic EPA exemption, the Langhorne, Pa.-based Ecogen will be able to immediately field test recombinant Bt strains it has already developed, using the company's proprietary cloning vector system. Using this vector system, Ecogen can develop recombinant Bt strains that contain new combinations of Bt insecticidal genes but no foreign genetic information.

In 1991 the company received EPA go ahead to field test its first recombinant Bt strain without an experimental use permit.

The strain, developed to control the Colorado potato beetle and certain caterpillar insects, has been found to be very effective in field trials performed during 1991 and 1992.

Ecogen has already developed and is marketing second generation Bt products.

"This EPA testing exemption significantly enhances Ecogen's Bt development program by allowing novel Bt strains with unique gene combinations to be quickly evaluated in the field," said Dr. Bruce C. Carlton, executive vice president of research and development.

According to Carlton, the research allows Ecogen to develop new strains or alter existing strains.