Integrated Pest Management (IPM) is a system of plant management that utilizes a variety of strategies to maintain plants in a healthy and vigorous state. As applied to turf, IPM utilizes the following strategies:

- proper site placement
- proper site preparation and establishment practices
- species and cultivar adaptability and resistance to pest problems
- proper cultural practices (irrigation, mowing, fertilization and cultivation)
- pest management

All of these strategies are combined or integrated to manage turf in a healthy and vigorous state. No one strategy necessarily takes precedence over another. Like the pieces of a puzzle, all are critical to complete the entire picture of turfgrass management.

An interesting way to view this concept is to visualize the management process as a pyramid. (See Figure 1). The base of the pyramid is the site placement, site preparation, and establishment practices. The stronger the base the stronger the overall health and vigor of the lawn.

As turf managers we often inherit the mistakes of others made during the early stages of planning, preparation and establishment of lawns. Poorly prepared, compacted subsoils are an all too common reality we encounter in lawn care. Inappropriate species or cultivar selection, poor establishment practices and timing or establishment in areas not well suited culturally to turfgrass may also be complicating factors for long term turfgrass management. Note the instability of the pyramid.

A realistic level of expectation for the lawn area and a knowledge of the necessary inputs and time frame required to overcome site and establishment problems should be conveyed to the customer. This in essence takes us off the hook for a slow-to-respond or problem lawn. It also changes our focus and the focus of the owner or property manager away from a single season approach to a long term management plan. Communication thus becomes a critical factor with an IPM approach to lawn care.

Cultural practices are what most lawn care managers have direct influence over. It is here that most planning and program development should take place, even in areas like mowing and irrigation that may not be directly implemented by the lawn care manager. Proper cultural management is critical to healthy turfgrass.

continued on page 4
IPM for Lawn Care
continued from front cover

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Why IPM? Pressure for Change

Many pressures exist for modifying traditional lawn care practices into practices based on an IPM philosophy. These pressures continue to increase and this trend is not likely to reverse in the future. The pressures for change can be categorized into the following general groups:

• Public Perception
• Environmental
• Governmental
• Agronomic
• Financial

Public perception of pesticide use often is negative. A perceived threat to health and safety from pesticides exists in the minds of many consumers. Television, radio, newspapers, and magazines continue to sensationalize and exaggerate health effects from pesticide use with little effort made to report information from a scientific basis or to report on the benefits of lawns. Because traditional lawn care programs focused on the use of pesticides, it became easy for the mass media to simplify lawn care into a pesticide spray operation rather than a total management system.

As a response to the negative public perception of pesticides and the environmental concerns raised, the government on the national, state and local levels has become involved. Lawn care tends to be a very easy and visible target to focus upon. Many local communities have attempted to enact ordinances regulating lawn care operations.

A less visible pressure for an IPM approach to lawn care is one of agronomics. A traditional lawn care program is not sound agronomically. Research continues to demonstrate the importance of a total management approach to lawn care. The impact of pesticides beyond the target pest is also better understood. Often this impact is negative and works to complicate lawn management.

Finally, IPM makes sense financially. A reduction in pesticide use saves money. When a subsequent increase in pest management and increase in lawn health, vigor and quality results, additional financial returns are realized. Savings are both short and long term. An increase in competitiveness, especially for the small to mid-size operator, also can result with an IPM approach to lawn care. With improved competitiveness and reduction in costs comes increased profits. Additional services can be offered with an IPM approach and, in fact, additional services fit very well into an IPM system. Additional services can help to improve market share by increasing the customer base and can also increase to revenue generated per customer.

Implementation of an IPM Approach

IPM is a philosophy. In order to implement an IPM approach in your lawn care operation you must believe in the benefits of IPM and understand the concept. Often this concept is easy to understand but it may be difficult to figure out a way to implement it. The difficulty in implementation is what prevents many operators from making what seems to be a risky and dramatic change in operations. The beauty of IPM is that it allows a progression of change from a traditional lawn care approach where every lawn gets the same treatment at a certain time of the year to a degree of IPM that fits the comfort level of the particular business. An all or nothing attitude is not necessary with IPM. Believe in the philosophy, understand the concept and begin to incorporate IPM principles into your business at the pace that suits your operation.

To understand how to implement an IPM approach in lawn care, it is easiest to look at a purer and more complete IPM program rather than the pieces that can be incorporated into your individual operation. There are four basic steps in implementing an IPM approach to lawn care:

• Initial lawn inspection
• Development of a management plan
• Monitoring and treatment based on the management plan
• Evaluation and modification of the management plan

The initial lawn inspection should be as detailed as possible to provide accurate and thorough information for the development of the management plan. Information that is helpful
includes: grass species and cultivars; current mowing height; current irrigation practices; soil profile and texture; soil drainage; soil test information; weed populations; disease activity; insect activity; date of establishment; establishment method; and the expectations of the owner or property manager.

Once this inspection information is compiled, a management plan can be developed. It is this management plan that provides specifications and recommendations for the season. Included should be cultural recommendations, even if direct responsibility for the implementation of certain cultural practices like mowing or irrigation does not lie with the lawn care operator.

Once accepted by the customer, the management plan can be implemented. Typically a series of visits are required at which time problems are monitored and certain treatments are applied. Fertilization based on the site inspection is considered a treatment. Other services such as aerification and overseeding can be scheduled as part of the programmed visits. Pesticides are applied based on the predictions made in the management plan and the activity noted at the time of the visit. In essence each visit becomes an inspection. Pesticides, when applied, should be targeted to high risk areas or areas where pest activity is present. At times, no particular treatment may be applied at the time of a visit but the site would still be monitored and inspected.

Easily neglected but just as critical to the success of an IPM approach is the evaluation and modification of the management plan. Certain sites will require little modification while others will require considerable change, especially as problem sites begin to respond to proper management. In these problem situations, inputs actually tend to decrease with time when an IPM approach is followed.

At each step of the IPM process communication is critical. IPM is information based rather than product based. Communication with the owner or property manager makes or breaks the success of an IPM program. The inspection, the management plan, the monitoring and treatment visits, and the subsequent evaluation of the program should all be approached as a form of customer communication. The client should be able to develop a realistic expectation of the site and a knowledge of the inherent problems associated with the site using the information provided.

Communication also becomes critical with the technician that conducts the site visits and treatments. If possible, the technician should be involved at all stages of the IPM process. Obviously, good verbal and written communication skills are a prerequisite to a quality technician. A level of knowledge above the industry norm is desirable, but this is more easily trained than communication skills and attitude.

**Marketing IPM for Lawn Care**

The belief in IPM as a philosophy is also critical to the marketing of an IPM approach. A mistake often made is to offer a traditional lawn care option and an IPM option. IPM is at a disadvantage simply due to an experience factor: sales staff, clients and technicians are much more familiar with the traditional approach and IPM will be shuffled aside because it’s too confusing, too expensive, or too difficult to implement. Rather, it is better to implement certain principles of IPM in the process of gradual transition away from a traditional approach to a certain level of IPM. Practices such as targeting pesticides, offering additional management services, soil testing to determine fertilizer recommendations, and development of fact sheets on cultural practices and pest problems are all simple ways to ease into IPM. A close look at your current operation may already reveal many IPM principles at work.

Marketing IPM is also about marketing professionalism. Since IPM is information-based rather than product-based, it is important to feel comfortable selling service, which is what most professionals sell. Our industry has always talked about service but we did not make any money unless we sold a product in the form of an application. We must change this attitude.

Your doctor, your dentist, your lawyer all charge you for their expertise. Critics argue that the expertise of these professions is greater than someone in lawn care. But your plumber, your electrician, your auto mechanic, the person that fixes or maintains your home appliances also charges for their expertise. Surely we are on a par with this group. An argument is made often that the consumer won’t tolerate a charge for our expertise. That’s only because as a profession we don’t charge them. Try finding a repairman for your washer that you can talk out of his service charge. It is an industry standard that we as consumers have come to expect.

With an IPM approach, not treating is a very viable option in certain cases. What makes it viable in these certain cases is that it is also a very good option agronomically or environmentally. Unless we charge for our ability to make this type of management decision, we can not operate with an IPM approach profitably.

continued on page 10
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Fees also are important to cover what may be more time spent during the initial inspection and the development of the management plan. Time is critical at these stages since we are gathering information and making recommendations that will decide the success of the lawn care program for that particular site. Short cuts at these stages jeopardize the end results and ultimately the quality of the lawn.

Money well spent is a powerful inducement to a consumer. IPM eliminates unnecessary treatments and manages the lawn as a unique entity and not just as another stop in a tanker truck’s route. Service is personalized and the needs of the consumer are met.

Finally, the environmental issues provide an opportunity for marketing an IPM approach. Unfortunately these same issues are also subject to abuse and confusion on the part of our industry if not handled in an honest and professional manner. IPM does not eliminate pesticides. What IPM does accomplish is lawn care using the best available management practices. Pesticides are not the focus of this approach but are one of many valuable management tools available for use by a professional when deciding a course of action for the particular lawn. IPM meets the environmental concerns of the consumer. Just as critical, IPM meets the needs of government and may help change the overall public perception of lawn care.

To properly market IPM, it is first necessary to believe in the philosophy of IPM. Begin to implement IPM principles as a transition away from a traditional lawn care approach. Secondly, we must believe in ourselves as professionals and be willing to charge for our expertise. There are hundreds of reasons not to charge, none of which is good.

Once we change our minds, it now becomes time to change the minds of consumers. IPM is common sense that a consumer can conceptualize. IPM is proper turf management. IPM is money well spent. And IPM meets the environmental concerns of the consumer.

IPM represents the future of our profession. The writing is on the wall. Our traditional approach to lawn care is the dinosaur in the process of extinction. IPM principles put the control back into our hands as an industry. This control is not only control of lawn care practices but control of the decisions that effect our livelihoods. IPM represents self-regulation which is the best type of regulation for any profession.

Suggestions for Implementing a Lawn Care IPM Program

- Soil test to determine soil pH, phosphorus and potassium levels and base your fertilizer selection on the test results.
- Target apply pesticides only to those areas where pest activity is occurring or where pest pressure is high. This can reduce your pesticide use by up to 50% which means money in your pocket.
- Do a thorough site inspection that looks at the whole management picture. Make recommendations even if the client is responsible for the particular service in question. This is also a good way to generate more work for yourself.
- Charge!! What other profession doesn’t charge for their expertise. Soil testing, site inspections or other advisory services are worth something. Remember that IPM is not product-based but management- and information-based. A viable option with IPM is to do nothing. You should get paid for this decision.
- Look and act professional. Uniforms, truck logos, consistent forms are just some of the ways to increase professionalism.
- Become more information-based. Send out a newsletter, develop fact sheets, and provide regular management updates to clients. Leave good notes that communicate with the client.
- Implement or offer bio-organics in your program. IPM is conscious of the environment and these products can have a place in an IPM approach.
- Consider equipment that reduces drift, injects pesticides as needed, or in other ways reduces the chance of nontarget exposure.
- Time pesticide applications to reduce the exposure to humans, pets and nontarget organisms.
- Become familiar with the products you use and attempt to get information about environmental impact.
- Try to select the product that will have the least amount of environmental impact.
- Investigate bio-controls like BT. Others are sure to become available to lawn care.

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