



IPM Corner

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What is IPM?

In this issue I would like to define Integrated Pest Management (IPM) and briefly explain the most important fundamental components of an IPM program.

The challenge facing turfgrass pest managers in the next decade is to reduce the use of pesticides while still maintaining quality turfgrass. The forces driving the challenge include: 1) In the future, there will be many additional laws and regulations governing worker rights, pesticide use, and the fate of pesticides in the environment. The new laws and regulations will make pesticide applications difficult; 2) A growing awareness of pesticide impacts on the environment and public fears concerning pesticide use. This form of pesticide phobia is going to curtail the use of many chemicals; 3) Over 475 insects, mites, weeds and plant diseases are resistant to chemical control. Consequently pest managers are increasing the rate and frequency of applications to obtain moderate control. New pesticide registrations are rare.

Prudent pest managers are addressing the challenge by changing the way they practice pest control. Integrated Pest Management is an excellent method to combat this problem.

Integrated Pest Management is a concept with a primary goal of optimizing pest prevention and control in an economic and ecologically sound way. IPM is a simple, practical and, most important, a flexible way to manage insect, mite, plant disease, and weed pests.

IPM is a preventive approach that incorporates other inputs besides a spray schedule into your pest management program. The information generated in an IPM program enables a turfgrass manager to make sound pest management decisions. If pest control is warranted, IPM records can be valuable documentation to justify the control action. If needed, pesticides can be applied at the optimal time. Such action decreases the potential for hazards from misapplication and overuse of pesticides.

Preconceived Problems

One of the biggest misconceptions about IPM in turfgrass is that turf quality will suffer and the turf will attain pest damage prior to pest control action. This is incorrect. An IPM program cannot and will not sacrifice turfgrass quality or aesthetic value.

The second negative notion, associated with IPM has to do with risk. Many turfgrass managers think IPM is a risk. I find this hard to believe, considering many turfgrass managers rely on one set of tools (chemical pesticides) to protect their turf. That is a risk. Relying on one tool is dangerous. If you choose the wrong tool, it will not work. If you overuse or misuse the tool, eventually the tool will fail. Even the best tool wears out. Integrated pest managers incorporate other tools into their pest control tool box, therefore reducing the risk.

Fundamental IPM Techniques

IPM practitioners follow fundamental pest management principles to develop strategies that integrate chemical, biological, cultural and mechanical methods to prevent or control pests.

The fundamental principles of IPM include monitoring, pest identification, timing, and records keeping. These principles are applicable to all types of turfgrass settings such as golf courses and residential lawns. In this issue I will briefly describe the four components. In the next article we will get specific on each technique.

Monitoring

Successful pest management is based on early detection and correct pest identification. Monitoring (scouting) provides up-to-date accurate information on the status of the turfgrass and the pest(s). Regular turfgrass monitoring acts as an "early warning system" to potential turfgrass problems.

Scouting

A turfgrass scouting program generates data on insects, plant diseases, weeds, nutritional deficiencies, and other factors known to adversely affect turfgrass quality or value. Scouting is accomplished by making visual observations or sampling periodically to determine what, where and how many pest(s) are present or absent. Ultimately, the pest population levels or damage estimates derived from these observations are used as a basis for effective and economical pest management decisions. When pest management action is taken, regular turfgrass scouting is an excellent method to check the success or failure of the control.

There are pest monitoring and trapping devices commercially available for early detection of specific pest problems. In future articles I will explain the potential uses of these devices.

Identification

It is impossible to implement pest control action without accurately identifying the pest problem. Misdiagnosis of a pest usually results in three or four wasted pesticide applications of the wrong materials and a loss of valuable time. The correct action is often too late. The outcome is often dead or damaged turf and *unnecessary* environmental pollution. The ramifications of this type of pest control are increases in pesticide laws and regulations by the government.

A professional pest manager must have knowledge of the major pests likely to appear, where to look, how to identify them and their damage symptoms. It is not only important to know which pest(s) are present, but knowing the biology and life stage will determine the proper time to apply the pesticide. Many materials are effective only at certain stages of the pest's life cycle. For example, spraying for grubs works best when the grubs are in the early instar stages.

Timing

When chemicals fail, it is usually not because of product failure. The pesticide manufacturers spend millions of dollars verifying the efficacy of pesticides. Often the problem is

improper timing. When a material is applied at the wrong time, a turfgrass manager is wasting time and money.

Timing pest management action should include, but not be limited to: future use of the turf, weather forecast, turf condition, soil moisture, pest type (stage) and location. This type of information, together with label specifications, will provide optimal efficacy from the pest control action.

Records

Brief, concise and accurate information recorded on a data sheet is one of the best available tools to make a pest management decision. IPM programs rely on records to make recommendations. The time spent recording information on a ledger or data sheet is often hard to justify as productive. Pest managers trying to make a diagnosis of a problem without records are at a disadvantage and will overlook potential causes of the problem. When program evaluations and future plans are developed, records and data analysis are priceless. Field data sheets, maps of the turf, final reports, and spray records are a mandatory component of an IPM program.

Integrated Pest Management is an intelligent way to achieve safe long term pest management with as little effect on the surrounding environment as possible. Turfgrass managers employing IPM care about the quality of their turf and their environment.

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