

# SPORTS TURF MANAGER

... for better, safe, natural Sports Turf

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## IPM: What is It?

EDITOR MICHAEL BLADON EXPLORES THE ISSUE OF INTEGRATED PEST MANAGEMENT

One definition given for IPM is that it is a decision making process to suppress pests in an environmentally safe manner by reducing pesticide use with other types of controls. In his latest book *Understanding Turf Management*, Dr. R.W. Sheard writes that perhaps IPM should be an acronym for Intelligent Pest Management. A third perspective on the term, and the one I like best, is from the book *Sports Fields: A Manual for Design, Construction and Maintenance* by Jim Puhalla, Jeff Krans and Mike Goatley. They put forward their own philosophy and have defined it as ICM – Integrated Cultural Management – rather than IPM. Their rationale is that IPM focuses too narrowly on pests. ICM dwells on the entire subject matter of turf stresses. In other words, a well maintained stand of turfgrass is better able to resist the invasion of insects or disease.

Regardless of the definition, there can be barriers to implementation of the IPM approach to sports fields such as staff who are set in their ways, those who will not share information, and in some cases, a lack of community involvement. It can



Integrated Pest Management (IPM) is more than just reducing pesticide use – turf managers have to take a broad look at all turfgrass stresses.

also be difficult to explain that some pesticides are used in most IPM programs.

Three important considerations in IPM programs are: 1) a good working knowledge of the pest; 2) knowing if you need to treat, and if so, the best treatment times. Scouting or monitoring the field is vital, as is record keeping and your tolerance of injury level – what are you willing to live with before you feel the need to take action; and 3) knowing and understanding all the options available to you. Too often the turfgrass manager does not know a par-

ticular pest's life cycle which certainly limits his/her ability to control the problem.

In the landscape design of park systems, we need plants that are adapted to the site, cultivars that are resistant to certain pests, and native species – diversity rather than monoculture. We also need to release beneficial insects, such as aphid predators, or microbials which are the least toxic to the environment.

Sports field managers need to manage the various stresses involved with field management. Puhalla *et al.* rank stresses as follows: 1) environmental – water, light, air and temperature; 2) me-

chanical – foot traffic, cleats, mowers and maintenance equipment; and finally 3) pests – weeds, insects and disease.

Good cultural practices are essential and involve the need to know soil types, pH levels, fertility and adequate drainage. Wise use of fertilizers and sound judgment in the maintenance of moisture levels through watering programs are also necessary. Next comes thatch removal to not only eliminate an area where pests may reside but also to enhance chemical treatments or fertilizer ... *continued on page 2*

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# Integrated Pest Management

FRONT COVER ARTICLE CONTINUED

effectiveness. Core cultivation or aerifying is a necessary practice to relieve compaction and is a way to improve soils by topdressing immediately afterward. Last, but most important, is proper mowing, using a mower with sharp blades and the removal of a third of the grass blade at a time.

When a field is in the planning stage, we need to look at cost, not price. By cutting a contract down hundreds of dollars we may spend thousands of dollars in future maintenance. There are for example 'endophyte enhanced' varieties of perennial ryegrasses and tall fescues. Endophytes are fungi that live in the plant which have been found to be helpful to the health of the grass plant. These are not that much more expensive than regular varieties and are well worth the extra initial cost.

So have we wandered off the IPM topic? I do not think so. Is the technology to best implement IPM practices available to us? Environmental monitoring and weather forecasting technology help to minimize turf stresses and pest forecasting. The OMAFRA Turf Hot Line run by Pam Charbonneau at the Guelph Turfgrass Institute and the *GTI Advisor* are useful tools that are available. Alternative control strategies such as entomogenous nematodes (tiny eel-like worms), various bacteria and fungi and natural insecticides have been tested and proven effective. New programs, databases and formulas to select the appropriate pesticide are now more readily available and useful in the planning strategies and result in the least amount of environmental disruption.

If you are not already using some form of IPM, training is necessary to inform employees of new policies and procedures. Communication as to who is doing what, record keeping and an evaluation process to review the results of the program and make any changes necessary are also key.

In conclusion, with increasing numbers of cities and towns where pesticides are



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banned, we as managers of sports fields should be embracing better cultural practices not only for field safety but also to lessen the need for pesticides in the future. Also keep in mind that IPM is flexible – it may be implemented in a variety of ways with different levels of commitment. ♦

## References

- 1) *Sports Fields: A Manual for Design, Construction and Maintenance*, by Jim Pulhalla, Jeff Krans and Mike Goatley. Ann Arbor Press, 1999.
- 2) *IPM: How Do We Tackle It?* Dr. Linda Gilkeson, Alumni Conference, Niagara Parks School of Horticulture. January 1999.
- 3) *IPM City of Toronto*, John Howard. Ontario Turfgrass Conference, January 2000.
- 4) *IPM System Joins Goals of Managers*, R.L. Brandenburg. Turf and Landscape Press, January 1996.

## Words of Wisdom ...

"Whenever an individual or a business decides that success has been attained progress stops." *Thomas J. Watson*

"Part of our time is snatched from us, part is gently subtracted, and part slides insensibly by."

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