

IPM

Integrated pest management for K-12 turf managers

INTEGRATED PEST MANAGEMENT (IPM)—if you search the web you will find no less than 15 definitions and nearly as many suggestions for how to develop a program. There are multiple thoughts and perspectives on the importance and strategy of IPM. No wonder we struggled, early on, to define our goals and chart a course of action for our school district.

Fortunately we were able to work closely with extension experts, Dr. Dave Shetlar and Pam Sherratt of Ohio State's turfgrass science team to network, share ideas and gain an understanding of IPM and what we needed to do to implement an effective program for school grounds.

Along the way, we came to realize that implementing an effective IPM program was going to require a shift in thinking from a "that's the way we've always done it" or "that's the way they do it" mindset to one that asks questions like: "Why do we do it this way?", "What should we do?", "What are the benefits?", "What are the risks?", "Who does it affect?" and "What are all the options?". In Dr. Shetlar's words, "...the real heart of IPM is that it is a decision-making PROCESS. You have to think, ask questions and make decisions."

We have learned a few things as we have developed our IPM program here at Westerville City (OH) schools. My intent is not to teach you great truths that you've never heard before or impress you with the

intricacies of plant and pest physiology. Most of you are probably already practicing many of the techniques that make for an effective IPM program anyway. Hopefully you can take from our experience and perspective something that will benefit your own programs.

When we began developing our program more than 7 years ago, there was no law that said we had to. IPM was mandated for school districts under Ohio law for a short time in 2008 but funding issues caused its repeal. Our Director of Business Services, Jeff LeRose, coaches his people to always be looking to do what is right for the students, staff and community that we serve. Since student health and safety is a priority in our district, providing safe, well-maintained facilities by controlling harmful pests in a least toxic, most effective way is the right thing to do. We do IPM because we are in the people business and people do matter.

It has been our goal to create a non-disposable, user-friendly program; one that can be shared with others and that doesn't make sense not to use. It has also been our desire to reduce chemical use and provide safe, durable playing surfaces. It has taken cooperation from administrators, buildings, grounds and custodial staff, teachers, university extension, vendors and parents to create this type of program. Additionally, we contract with an IPM-gearred pest control service to help coordinate our program and provide annual inspections of our facilities.

At times, we have moved forward at a fast pace and developed segments of the program rather quickly; at other times we have moved at a snail's pace, sometimes struggling to determine what the next step should be. The key is to keep moving forward to reach our goals, always remembering that this, like anything we develop, is a process and that it will require time, patience and a desire to continually improve our systems.

There are a few components of our program that are common to our both our structural and grounds areas. These include: performing site assessments to determine what pests may need managed and what types of controls would be used; establishing threshold levels; regular monitoring to determine if pests are present, if they have exceeded threshold levels and whether controls are



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effective and are needed; educating ourselves and those we serve on the practices and mindset of IPM; and planning and implementing improvements to the program.

Focusing on the turf side of things, there are many common cultural practices that we employ in order to build dense stands of turf that can resist pest pressure and are safe for play. Examples include:

- Selecting suitable grasses and plant materials that are pest and drought resistance, and wear tolerant
- Using proper mowing techniques (follow the 1/3 rule, keep sharp blades, use higher [3 inches] mowing heights)
- Aeration or de-compaction to keep the soil loose to allow water and air to the roots, giving them room to grow
- Proper fertilization based on bi-annual soil tests and plant health
- Irrigation and water management—not too much, not too little while monitoring for plant needs. Areas where water stays too long are addressed by grading, drainage and soil modifications
- Seeding; generous amounts anywhere turf is thin with good seed to soil contact and mulching for protection on bare ground. Light, frequent irrigation to encourage germination and non-irrigated areas planted during best window for your region. We use predominantly turf type tall fescues due to their durability and drought resistance
- Try new things: we often plant high traffic playground fields with turf varieties that we want to test for wear tolerance; we look for varieties that hold up to high traffic with minimal maintenance. Our current tests include bermudagrass, hybrid bluegrass and growth regulator effects.

The control options we have available to use in managing pests are an important part of our IPM program. Each pest concern is evaluated by members of our grounds crew and other individuals we work with who are trained in IPM practices. They are charged

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with picking control options that are least toxic and most effective when it is determined that controls are warranted. The team also evaluates control options based on the permanency of their effect.

Examples of our most common control options include:

- Mechanical control; removal by hand, string trimming, mowing
- Natural control; endophytic grasses that are resistant to pests & composts
- Biological control; growth regulators are the only item we use in

this area currently, although we are beginning to work with one of our high school science departments as they experiment with compost teas.

- Habitat modification; eliminating sources of food, shelter and water that a pest would need to survive, e.g., renovating to remove pockets of standing water which in turn can reduce mosquito populations
- Chemical control; used judiciously for targeted, spot applications where other control options cannot provide the needed control in a least toxic, most effective manner; products with the lowest possible toxicity and highest effectiveness are chosen; when possible, applications are planned for periods when the pest can be treated with the lowest dose rate.

While these practices have helped us reduce chemical use, create better fields and facilities, make informed decisions and earn the IPM Institute's STAR Award, they do not tell the whole story of our success as a ground team or a school district. There are a few other "people" practices that are central to our process as we seek to educate others in our district about the importance of IPM practices and gain their cooperation.

These include:

- Relational practices like sharing, communicating, networking, getting along with others, and building relationship bridges

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- Organizational skills like time management, developing standardized procedures, using technology, planning ahead, managing resources, focus
- Education: knowing our stuff, always be learning, attend conferences and field days, work with university extension staff, use university research websites, and STMA resources.
- Professional practices such as project a good image, reach out to others, build trust, and add value to the team.

At the end of the day, IPM is important because people are important. They matter; each and every one of them. How we manage the tools, resources and ideas we have at hand can help others or hurt them. The right thing to do is to help them. After all, isn't that how we want them to treat us? ■

Kenny Nichols is head of grounds maintenance for the Westerville City Schools, Westerville, OH and a board member of the Ohio Sports Turf Managers Association, www.ostma.org.



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