

IPM Accreditation

THE BEST LAID PLAN

With the Ontario Cosmetic Pesticides Ban coming into effect in 2009, many golf course superintendents throughout the province and perhaps the country are wondering what effect it will have on golf course maintenance. In Ontario, specifically, all golf courses will be required to obtain Integrated Pest Management (IPM) accreditation within three years. Ontario is not alone as similar legislation is passing in other provinces as well.

CROSS CANADA TREND

Quebec already has a rather strict IPM requirement for golf course managers in place and other provinces like Manitoba and New Brunswick are following suit. In an effort to help protect Manitoba's vulnerable waters, restrictions on the application of any substance containing nitrogen or phosphorous were implemented within nutrient buffer zones.

All golf courses and driving ranges in Manitoba are required, under the Nutrient Management Regulation under the Water Protection Act, to register a Nutrient Management Plan to Manitoba Water Stewardship.

New Brunswick is facing a similar amendment and on June 18, 2009 the Minister of Environment announced his intention to implement changes to how lawn care pesticides will be managed including banning the use and sale of over 200 Over-the-Counter lawn care products. In addition, there will be new IPM provisions for lawn care professionals to significantly reduce their reliance on blanket treatments, and will instead promote spot treatment of problem areas.

The purpose of this article is to suggest some ways to implement an IPM program on your golf course.

THE IPM PLAN

1) Gather information about your turfgrass site:

Conduct a site assessment to identify areas of the golf course where pest potential or symptom development may be increased. Specifically, look for shaded areas that might lead to stressed turf or might create a microclimate conducive to development of disease (Figure 1).

Also look for vegetation that can be a potential source of pests or inoculum

such as landscaped areas, heavy tree lines or naturalized areas that can act as a source of weeds or insects. Finally, look for areas that can lead to weakened turf such as wear areas or high spots that might dry out. Remember a healthy turf stand is your best defense against pest invasion and symptom development in the presence of pests. The objective during the site assessment is to be as thorough as possible and as always, record everything you see.

Although a site assessment is a very useful tool for determining potential sites of pest issues, it is only a snapshot in time. Collecting background information (if available) is also important as it gives you an idea of past pest presence as well as past cultural, biological and chemical management strategies.

Once you have collected information, both present and past, it is important to thoroughly analyze the data to aid in developing a plan. Finally, be sure to accurately map your site profile – including data from both the current site assessment as well as the background information. If available, the use of Global

Positioning System (GPS) is an excellent way to map your data in a format that is long-lasting and easily tracked. If this is not an option, blueprints or scorecards are simple ways to map out the information you have collected.

2) Categorize your sites:

In order to determine monitoring frequency and to develop threshold levels specific to your site, you need to determine which areas are high to low priority, relative to their level of maintenance. Both the Ontario and the British Columbia IPM manuals describe the following classification system:

- Class A sites are those that receive a high level of maintenance. These are sites where we see a very low tolerance for damage and generally include greens and tees.
- Class B sites are those that receive a moderate level of maintenance and would include fairways and clubhouse lawns.
- Class C sites are those receiving little to no maintenance and would include roughs and naturalized areas.

- Site classification allows for appropriate thresholds and monitoring schedules to be developed while taking into account the tolerance for damage that the end users are willing to accept. Keep in mind that end user tolerance will help determine the site categorization as much as physical area of turf (e.g. on a high end private course, the roughs might be a Class B site as would the tees on a low-end public course).

3) Set your objectives:

Once you have your background and current site assessment mapped and analyzed it is time to set realistic objectives based on your data, your site categorization and the needs of your clients. It is helpful to split your objectives into short-term goals and long-term goals.

Short-term objectives are those that can be met within a short period of time and often with the resources already present on your site. These would include altering

cultural practices to improve stress tolerance, training some of your staff in scouting and IPM practices, collecting weather data using tools such as a rain gauge, a thermometer and a soil probe (temperature and moisture) and developing recording sheets for accurate record-keeping throughout the season.

Long-term objectives are a little loftier and build upon the short-term goals. They may include things like reducing pesticides by a set amount, altering your turfgrass species to more stress-tolerant varieties (Figure 2), improving or replacing your irrigation system, or purchasing a weather station to collect real-time continuous weather data from multiple locations.

4) Develop a program specific to your site:

Now that you have collected and analyzed information about your site, categorized areas within your site, and determined your short and long-term goals, it is time to develop a program for your specific site.

The program would include monitoring techniques, frequency and what data is to be collected and by whom. It should also take into account your specific site characteristics such as soil type, turf type and environmental conditions, as well as current cultural practices and the needs of the end user.

It is very important that your program be tailored to your site as what works for one golf course may not be appropriate for another. As you develop your program, be sure to communicate with your staff, members, owners, clientele or anyone who will be affected by the changes you are trying to implement.

5) Revise your program as necessary:

One of the most important things to remember is that your program must be flexible as it will likely change more than once over time. As you evaluate each treatment or change in cultural practices your program will evolve based on those



Figure 1

Golf green with weakened turf visible in shaded area due to competition for light and other resources.



Figure 2

Research trials on a low-input turfgrass species (velvet bentgrass) believed to be tolerant to the diseases dollar spot and gray snow mold.

implement a successful program on your course is to communicate and educate every step of the way.

Make sure that your staff is aware of what you are trying to do and also make sure that your clientele – be they your members or the general public – are also aware of the changes being made. With new legislation being passed on how turfgrass is to be maintained, we have reached a point where the status quo is no longer an option and if done correctly, IPM can be a win-win alternative for healthy turf.

All photos provided by Katerina Serlemitsos Jordan. The article has been altered for the purposes of Golf Business Canada magazine and was originally published in the May/June 2009 issue of GreenMaster and has been reprinted here with permission.

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evaluations. As you become more comfortable and experienced in your methods, your program will be more refined and need fewer adjustments each year. However, in order for an IPM program to be successful, it must be evaluated and examined with each passing year as weather patterns, use patterns and clientele expectations are all dynamic and the program must change with them.

In the end, developing an IPM program on a golf course is by no means a simple task. However, with cooperation

from all concerned parties, it can be a very successful, economically viable and environmentally-friendly way to combat pests and have healthy, sustainable turf.

WIN-WIN SOLUTION

It is important to understand that for an IPM program to be successful, you have to allow it time to take effect and there has to be either some tolerance for damage in certain areas or a change in the expectations on the part of the golfers. Either way, your best bet for being able to



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