Managing pest pressure

Preventing Pest Problems

Always use all the best cultural management practices at your disposal to provide an environment for turf to become well-established and dense. These practices include:

- selecting the correct grass for the situation
- using recommended varieties that are resistant to diseases
- aerifying compact soils to improve aeration and drainage
- overseeding high use areas frequently to reduce weed pressure
- mowing properly to improve turf density
- applying proper amounts of fertilizer and water to improve turf health

Remember, a dense healthy turf is the best defense against pest pressure.

Follow Integrated Pest Management (IPM) Steps

IPM is a decision-making process that strives to make best use of all available management tools, including cultural, biological, mechanical, environmental and chemical methods. IPM is effective, economical and minimizes risk to the environment and human health. IPM is also known as integrated turfgrass management, best management practices or plain old common sense. IPM is also the basis of a good organic program, even though synthetic chemical pesticides are not included in those programs.

Start with:

- assessing the situation (what is the scope/severity of the problem)
- identifying the pest
- establishing thresholds (how much can be tolerated before taking action)
- taking a course of action that can manage the pest while protecting health of humans and the environment.

Pesticide Use on School and Day Care Center Grounds

In 2010, New York State Education and Social Service laws were amended to **essentially prohibit the use of pesticides** on playing fields, playgrounds, and turf at schools and day care centers. This law is commonly referred to the **Child Safe Playing Fields Act** (CSPFA) which only allows specific pesticide products to be use on these sites. More information on this law can be found by downloading the final guidance document produced by the NYS Department of Environmental Conservation.

Emergency Applications are possible

Under the law, a public school can seek permission for an emergency application from their school board. Non-public schools and day care centers ask the Department of Health (DOH) in the case of emergencies that threaten public health, or the NYSDEC for those significantly affecting the environment. The law does not indicate what might be construed as an "emergency". Download the Request for Determination for Emergency Pesticide Application.

Keep in mind that the NYSDEC Guidance advises that the NYSDEC, DOH and SED, in consultation with OCFS, identified the following situations that these agencies generally would not consider to warrant an emergency pesticide application determination:

- Routine or repetitive problems
- Pests which can be managed with allowed pesticides or alternative practices
- When the pesticide application would be for purely aesthetic purposes

Using Pesticides Properly

Safety is always a priority when using any pesticide. If you have the option to use pesticides as a management tool and conditions warrant the use of pesticides, keep in mind that you must be a NYS certified pesticide applicator. Only recommended materials should be used and applied according to label directions. Always use the latest Cornell Turf Pest Management Guidelines for Insect, Disease and Weed Management when developing pest management strategies.

Another Pest Management Tool: Using Growing Degree Days for more precision

We cannot accurately predict plant and insect growth based on calendar dates since the weather is sure to differ from season to season. However, from years of collecting data and making observations, scientists have found that a more precise way to note plant and insect growth and development is to relate it to temperature. Growing Degree Days (GDD) units can be used to

predict the likelihood of weed germination, 1st instar of an insect, seedhead emergence, etc.

GDDs represent the accumulation of "heat units" based on temperature and are recorded daily over the growing season. GDDs are calculated by taking the average of the daily low and high temperatures

Growing Degree Day information can add precision to your pest management program.

and subtracting the base temperature (50°). Although the base temperature can vary depending on the plant or organism, the most common base temperature used is 50°. Each day's GDD is added to the previous days and a cumulative total is kept.

In the example below the daily high temperature was 70° and the daily low temperature was 50°.

Growing degree days = 70° + 50° = 60° (average daily temp) - 50° (base temp) = 10 GDD were 2 accumulated

The below chart shows that 63 GDD were accumulated in the first week of April.

Calendar date	Apr 1	Apr 2	Apr 3	Apr 4	Apr 5	Apr 6	Apr 7
Daily average temp °F	55	65	63	50	48	60	70
Base temperature °F	50	50	50	50	50	50	50
Daily GDD	5	15	13	0	0	10	20
Cumulative GDD	5	20	33	33	33	43	63

When calculating GDD, remember that the base temperature of 50° is used throughout the season and there are no negative GDD. For example on April 5th the daily average temperature was 48°, no heat units were accumulated so the GDD for that day is 0.

Growing Degree Day information can be found at Northeast Regional Climate Center Forecast site. For a practical example of using GDD to fine tune your crabgrass management strategy click here. 3.31.14

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