

CGSA Policy Series

Policy Statement on Nutrient Use on Golf Courses

Nutrients are essential for plant life, including grass. Healthy golf course turf helps to stabilize the soil, prevent erosion, maintain or improve water quality, keep the surrounding environment cool in the summer and provide a safe, consistent “playing field” for golfers. Properly fertilized turf discourages weed growth and reduces the need for pesticides.

Fertilizer plays a critical role in maintaining proper nutrient levels for the turf on golf courses. Proper management of nutrient applications requires a detailed annual plan that is specific to the golf course site, conditions and level of use. The critical components of a nutrient treatment plan include:

- the determination of the correct amounts of each nutrient required based on plant and environmental conditions;
- the timing of applications so as to maximize the effectiveness and efficiency;
- the use of the proper form of nutrient (slow release, water soluble, liquid, etc.), and;
- the identification of the area(s) of the golf course where nutrients are required.

The proper objective of a fertilizer management program is to supply plant nutrients at the proper time and in the proper amount to supply sufficient food for the turf with no excess.

Fertilizers are necessary to maintain healthy turfgrass that is under heavy use. The primary necessary turfgrass fertilizer nutrients are nitrogen (N), phosphorous (P) and potassium (K). Excessive applications of N and P can encourage weed growth and turf disease and result in the contamination of both ground and surface waters.

Surface runoff from established, healthy turf does not usually carry harmful amounts of N and P. The potential for nutrient contaminated runoff increases in newly seeded areas, on steep slopes, when application is done at improper times, and during rehabilitation of depleted or damaged turfgrass. Recommendations are:

- determine the rate of application of nutrients to any area based on the source of nutrients being used, the amount of traffic on the area being treated, the time of year, the nature of the soil media and the amount of sunlight that the treated area receives;
- Follow irrigation practices suggested by the manufacturer so as to reduce or minimize the possibility of leaching;
- Test soil conditions regularly and use the information from these tests to assist with decisions concerning the type of nutrients that are needed and the alternatives that can or should be used;
- Develop and document fertilizer programs for each area of the golf course. Nutrient needs vary by cultivar, soil conditions, and use pressure. Establish a fertilizer plan that addresses the different needs of each area of the course;

- Keep detailed records of the application frequency, timing, formulation and amount, soil and weather conditions for each application;
- Never exceed the application levels noted on the package label;
- Avoid fertilizer applications during dry soil conditions or just prior to significant rainfall events;
- On coarse textured soils, use lower amounts applied more frequently in order to meet the turf nutrient requirements;
- Maintain a fertilizer free transition zone around all surface waters, including storm water retention facilities;
- Transition zone grasses that receive no fertilizer act as buffers or filter strips. This zone should be considered the upper area of the riparian buffer;
- Use moderate applications of fertilizer on newly seeded areas. Grasses lacking a fully developed root system are unable to assimilate high levels of nutrients. Use several light applications in the critical establishment phase;
- Soil additions and alternatives to nutrients should be considered to reduce the amount of nutrient required and reduce the chance for leaching, and;
- Support research into products that provide for better transfer of nutrients to the plant and that reduce the chances of nutrients either being washed into surface water or leached into ground water.

Applying too much fertilizer is wasteful, not cost effective and can harm the soil or be lost to the environment. At the same time, too little fertilizer can leave turf weakened and susceptible to disease due to a lack of nutrients.

CGSA is prepared to work with governments and government agencies to establish the appropriate standards for fertilizer or nutrient use. The association is also willing to work with the fertilizer industry and the Canadian Food Inspection Agency (Fertilizer Section) to establish national use standards. These stakeholders also need to work cooperatively to communicate the importance of responsible nutrient use.

The effective use of fertilizers in golf course management also needs to be proactively communicated to the media and to golf course managers, owners, and golf course leaders. Politicians and government officials need to have the facts about fertilizers and the ways that golf course superintendents use fertilizer to help protect lakes and rivers.