

# Nitrogen and Lawns



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We know nitrogen (N) is important for turf grass growth and quality. It maintains dark green color, enhances shoot density, and increases grass resistance to stress and pest injury.

- ☹ But, *too much N* can be detrimental to the turf grass:
  - It increases disease problems.
  - It reduces tolerance to high- and low-temperature stress.
  - Too much growth increases ...
    - moisture stress,
    - thatch potential, and
    - mowing time.
- ☹ Too much N can also be bad for the environment:
  - It increases risk of ground water pollution.
  - It increases energy usage (mowing and fertilizer).

## Ways of Reducing N Fertilization and/or Risk of N Leaching

- ☺ Be willing to use less than “optimum” N fertilizer:
  - Apply no more than 1 lb. of N/1000 ft<sup>2</sup> per application and no more than two applications per year.
  - Raise mowing height to reduce turf grass stress and weeds.
- ☺ Use specialty turf fertilizers that have a high proportion of water-insoluble N (WIN):
  - When possible, use N fertilizers with at least 50% WIN of total N.
  - Natural organic sources are 100% WIN (therefore, slow-release).
- ☺ Apply at appropriate times of year:
  - Avoid or reduce summer applications.
  - The best one-time-a-year application is mid-September to mid-October.
- ☺ Recycle grass clippings back to turf:
  - About 46 – 59% of the applied N from fertilizer ends up in the clippings.
  - One estimate shows that returning grass clippings can contribute about 2 lb. N/1000 ft<sup>2</sup>/year.
  - Returning grass clippings to the turf can reduce fertilizer needs by 25 – 40%.
- ☺ For some lawns, a legume (white clover) grown with the grass reduces the need for nitrogen fertilizer.

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### **Warning! All pesticides are poisons. Use them only as a last resort!**

**Before using any insecticide, herbicide, or fungicide:** 1) Know your problem. Positively identify the insect or disease. 2) Monitor the problem. Is treatment necessary? 3) Use non-chemical cultural controls first. 4) If you must use a chemical control, *carefully follow all directions and safety precautions on the label!*

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