Reducing The Risk of Excessive Nitrogen Fertilization on Turf

We know nitrogen (N) is important for turf 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:
♦ Increases disease problems
♦ Reduces tolerance to high and low temperature stress
♦ Too much growth increases
  □ Moisture stress
  □ Thatch potential
  □ Mowing time

Too much N can also be bad for the environment:
♦ Increases risk of ground water pollution
♦ Increases energy usage (mowing and fertilizer)

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

Be willing to have “less than ideal” quality turf by using less that “optimum” N fertilizer
□ No more than 1 lb. of N/1000 ft$^2$ per application and no more than two applications per year
□ Raise mowing height to reduce turf 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% 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$^2$/year
□ Returning grass clippings to the turf can reduce fertilizer needs by 25 – 40%

For some turf, add or rely on a legume (white clover) rather than using N

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