

## Making Recommendations for Lawn Fertilizer Application and Management

Many Maine parks, golf courses, and residential landscapes are located near ponds, lakes, rivers and coastal waters. These surface waters can be degraded by nutrient loss resulting from overapplication or improper application of fertilizers to home lawns and other turfgrass areas. Groundwater can also be contaminated from nutrients lost from lawns. Recent research has provided data that should change the way we advise clients in fertilizing and managing lawns and other turfgrass areas.

### Recommendations for Managing Nitrogen (N) on Lawns

- If an unfertilized lawn is considered acceptable, then do not fertilize.
- If the lawn is considered unacceptable, assess why (pests, compaction, shade, low fertility, etc.). If fertilization is deemed necessary:
  - Do not apply before spring green-up and apply no later than September 15<sup>th</sup>. Avoid fertilizing in the midsummer.
  - Apply one-half to one-third (or less) of that recommended on the fertilizer bag label, then monitor lawn response. Reapply at the reduced rate only when lawn response starts to fall below acceptability.
  - Slow-release formulations are preferred over soluble, fast-release formulations.
  - Apply a maximum of 2 lbs N/1000ft<sup>2</sup>/year on established lawns that are 10 years old or older. Newly seeded turf, especially on new home sites where the topsoil has been removed, may require more.
  - If a soil test indicates that phosphorus (P) and/or potassium (K) are adequate, then fertilize with only nitrogen (N). If only blended fertilizers are available, choose the blend with the lowest P content.
  - If near surface water (streams, rivers, lakes, estuaries, bays, coastal areas, vernal pools, wetlands or drainage areas), leave a buffer strip of at least 25 feet of unfertilized grasses or other vegetation around the water bodies.
  - Avoid using combination products that include both fertilizers and weed killers. Fertilizers with herbicides may not be applied within 25 feet of surface water.
- Other management considerations:
  - Return clippings and mow as high as possible (leave at least 3 inches). This can supply slow-release nitrogen to the lawn and allow for reduced fertilizer applications.
  - Choose grasses such as fescues that require less nutrient and water inputs.
  - Maintain soil pH levels between 6.0 and 6.5.
  - Consider seeding white clover or other low-growing legumes into the lawn to naturally provide nitrogen.
  - If supplemental watering is applied, avoid overwatering. Do not exceed a total of 1-inch of water per week, including rainfall amounts.
- When establishing new lawns, if soil organic matter is below 3%, incorporate compost or another organic matter into the soil to raise the organic matter content to at least 3%, and preferably 5%.

*Phosphorus recommendations on back →*

## Recommendations for Managing Phosphorus (P) on Lawns

- If an unfertilized lawn is considered acceptable, then do not fertilize.
- Always test soil to determine phosphorus levels before applying.
- If phosphorus fertilizer is deemed necessary:
  - Avoid using P fertilizers on bare ground or low-density lawns, unless it is a new seeding.
  - Use P-free fertilizer on lawns, unless soil tests indicate that the soils are low in P.
  - Avoid applying P fertilizers when moderate to heavy rain is forecast.
  - Leave a buffer strip of unfertilized grasses or other vegetation around water bodies.
  - Never apply P fertilizer to saturated or frozen ground.
  - Avoid using products that include both fertilizers and weed killers. The application rates on the bag label are usually based on the weed killer rather than the fertilizer.
- Other management considerations:
  - Return clippings where possible. On a well established lawn, this can often supply adequate P for the lawn.
  - Maintain a soil pH of 6.0 to 6.5. Monitor pH levels to determine if and when liming is necessary.
  - Soil test annually for P when applying organic fertilizers derived from composts to ensure that P levels do not become excessive.

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The information on this sheet is adapted from:

Guillard, K. 2008. New England Regional Nitrogen and Phosphorus Fertilizer and Associated Management Practice Recommendations for Lawns Based on Water Quality Considerations. University of Connecticut. For a complete copy of this document, go to:  
[www.umext.maine.edu/waterquality/fertilizers.htm](http://www.umext.maine.edu/waterquality/fertilizers.htm)

For additional information about soil testing, go to: <http://anlab.umesci.maine.edu/>



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