

**Lawn Fertility Made Easy**  
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Soil fertility can be a complex issue that many people take very lightly. Too often people think that if a little nitrogen is good then more must be a whole lot better. This is not the case as plants will only take up what they need for growth. Excess nitrogen can cause excessive foliar growth and may not harden off at the end of the season. Flowering and fruit quality can be impacted when high nitrogen levels are present. Trees and shrubs do not require additional fertilizer above what has been applied for turfgrass.

The amount of fertilizer one should use depends on several factors. How you maintain your lawn, how much you water, your current soil fertility levels, and your views on using non-organic fertilizers. For a high maintenance lawn with a constant supply of water (one inch per week) apply four treatments of one pound of actual Nitrogen per 1000 square feet. For a lawn without irrigation but higher maintenance apply only three treatments. A low maintenance lawn should have one or two applications yearly at this rate depending on whether you water or not. If clippings are left on the lawn you can reduce your total applications by one.

I suggest a soil test to determine soil fertility prior to any fertilization. Testing for nitrogen, potassium, phosphorus, pH, salt, and organic matter will give you a good starting point. Soil test kits are available in our office; the cost of testing is under \$15.00 depending on which tests you choose to have done. Using the information in the soil test results it is possible to calculate the precise amount of fertilizer needed.

The question then remains as to what type of fertilizer to use. A good N-P-K ratio to use for your final lawn fertilization is 4-0-2 or 4-0-3. This means that the commercial analysis on the fertilizer bag should be within these ratios. Notice that the middle number is zero, using fertilizer without phosphorus is a good idea to help protect our lakes and streams. Most of our soils have sufficient amounts of phosphorus and it does not leach out of the root zone. The first number is the important one; nitrogen leaches out of the root zone very quickly and is the most needed element for plant growth. Base your fertilizer calculations on this number.

Even as the air temperatures start to drop in September and October grass roots are continuing to grow. As long as soil temperatures remain above 32 degrees turfgrass will store nitrogen until growth resumes in the spring resulting in a nice dark green color earlier. This assists your lawn to be healthier and over winter better than those that go into winter with a nitrogen deficiency. Be sure to water the lawn well after fertilizer application if rain is not in the forecast.

For additional information you can call me at the Pennington County Extension office at 605-394-2188 or by e-mail at [ricky.abrahamson@sdstate.edu](mailto:ricky.abrahamson@sdstate.edu).