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## Environment, Gardening & Land Use

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## **FERTILIZING LAWNS**

Submitted by John Farfaglia

### **Use only what you need, and avoid spring applications.**

Just like people, lawns need a balanced diet, too. If you feed them too much, too little or the wrong kind of fertilizer, they won't be healthy. With lawns, **when** you fertilize is critical, too. (Fall is better than spring.)

### **Test your soil.**

A soil test will tell you how much (if any) phosphorus (P) and potassium (K) fertilizer your lawn needs. Contact your local Cornell Cooperative Extension office or the Cornell Nutrient Analysis Laboratory for more information. If tests indicate that no P or K is needed, use nitrogen fertilizer sources that contain little or no P and K.

### **Adjust pH, if needed.**

Lawns should have a slightly acid pH, between 6.0 and 7.0. If your soil tests fall outside of this range, follow instructions for adding lime or sulfur to bring pH into this range.

### **Focus on fall.**

If phosphorus and potassium levels are adequate in the soil, nitrogen (N) is the most important nutrient for grass growth. Understanding how grass grows is important when making decisions about how much and when to apply nitrogen fertilizer.

For most low-maintenance lawns, a single application in fall about two weeks after the last mowing is sufficient. Apply 1 pound of nitrogen per 1,000 square feet. (1 lb. N/1000 ft.<sup>2</sup>). Use a fertilizer that is about 70 percent slow-release nitrogen.



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For higher maintenance lawns, similar applications can be made around Labor Day and/or Memorial Day. But avoid early-spring applications. Research shows that these applications do not really enhance spring green-up compared with late-fall application. (Neglected lawns or sods thinned by winterkill may benefit from .5 lb. N/1000 ft.<sup>2</sup> after the soil has thawed and drained but before the grass greens up.) At least 50 to 75 percent of the nitrogen applied to any lawn should come between the months of August and November.

Fertilizing healthy lawn in spring just increases top growth (and mowing chores) at the expense of root growth. This lush, succulent growth encouraged by spring fertilization makes the plant more susceptible to insects and diseases. Plants with smaller roots are also more vulnerable to drought later in the season.

Lawns that did not receive fall fertilizer applications or have suffered from winter injury may benefit from spring nitrogen applications. But wait until soil temperatures have warmed to at least 55 F before applying.

**Water it in.**

Water your lawn with a quarter to a half inch after spreading fertilizer to get the material into the ground where it can be used by plants.

**Consider the source.**

Most synthetic lawn fertilizers contain at least 40% slow-release nitrogen. Slow-release N becomes available to the plant over a period of time depending on soil moisture, temperature and microbial activity. The balance of the N is water soluble nitrogen, which is readily available for plant uptake.

In addition to supplying N over a longer period of time, slow-release nitrogen sources have a lower risk of burning plants and a lower potential to pollute water than water-soluble N sources. The tradeoff is that slow-release N is usually more expensive.

Natural organic fertilizers supply nitrogen in complex organic forms that are not immediately available to plants. They require warm, moist soils for microbial activity to release N. Natural organic fertilizers are well-suited for applications during warm summer months when the potential for burning plants with high-salt synthetic fertilizers is higher.

Lawns grown on mostly sandy soils should rely more on slow-release nitrogen to reduce the possibility of N leaching out of the root zone. Research shows that on most soils with some silt and clay, nitrogen leaching from lawns is rare.

**Consider different needs.**

High-traffic areas usually require more fertilizer than low-traffic areas. Different species of grass have different needs, too. Kentucky bluegrass, for example, requires more nitrogen than fine leaf fescues.

If bluegrass doesn't get enough N, it is less competitive against weeds and pests. If fine leaf fescues (which normally grow slowly) get too much N, they produce lush, weak growth that is susceptible to pests.

**Apply with care.**

The whole idea is to get the right amount on the lawn and none in our streams and lakes. Rotary spreaders cover a wide swath. But they can also hurl fertilizer into streets and driveways where the next rain carries it into our waterways. A drop spreader may take a little longer, but it puts the fertilizer exactly where you want it. Use care loading spreaders. Sweep up spills before they become a pollution problem. Source: Cornell Gardening Resources

**ADVICE FROM THE ASSOCIATION  
FOR WILD ANIMAL REHABILITATION  
& EDUCATION SECOND CHANCES.**

Submitted by Paul E. Lehman



Information, education, emergencies 625-8189; also, website: awarewildlife.com.

- Fill your bird feeder all year round. Birds and other animals learn to



depend on it for feeding their young. If you want to stop feeding wait until fall.

- Hummingbird feeders should be left out until the end of October.
- Bread is NOT healthy food for any animals. It fills them with empty calories that have no nutritional value, and leaves them vulnerable to disease and starvation. Use bird seed or dry cat or dog food.
- Many birds are injured or killed flying into windows, because they see the reflection. Use “Clings” on the OUTSIDE of the window to break up the reflection, or turn a light on in front of your window, so they can see through it.
- All animals need fresh water all year round. In winter, use a garbage can lid and fill with hot water daily.
- SANDPAPER on perches of your pet birds can seriously harm their feet and even cause infections that can kill them.
- Double Shepherd hooks are trapping bird’s legs in the V where the hooks separate. Use electrical tape on the narrow part of the V to prevent this deadly injury.
- Trash can be a hazard for wildlife. Dispose of it properly and pick it up when you see it.
- **ALWAYS REMEMBER: Put wild animals in a WARM, DARK, QUIET PLACE, and leave them alone until you get help. Use paper towels for bedding, grass will chill them.**
- Call a Rehabilitator as soon as possible.
- Do not leave animals at the rehabbers house.



**Show you care, be AWARE.**



## **Why Did That Tree Die?**

Submitted by Paul E. Lehman

Most forest landowners care a great deal about the health of their trees. For many, the woodlot is an extension of their personal landscape. When a tree dies in their forest they want to know why it died and what will be the consequences to the rest of the forest.

In some cases the cause of a particular tree’s demise is fairly easy to determine. There may be a conspicuous scar from a lightning strike or a pileated woodpecker may have literally chopped the tree into fragments. Often times the tree may be seriously deformed from insect or disease attacks.

To find out exactly what happened, several important questions need to be answered. The first question is “what tree species is this?” Most tree diseases and many insect pests are quite specific in their choice of victims. For example, most diseases that affect white pine trees rarely bother oaks or maples. Sometimes diseases are even more specific. For example, there are diseases that attack pines which have two needles per bundle such as: Red, Scots or Austrian pine that does not bother the 5-needled white pine. Once you know the affected species you can begin the detective work in earnest! There are some excellent reference books that discuss specific diseases and insect pests according to the species affected. “Diseases of Trees and Shrubs” by Sinclair and Lyons and “Insects that Feed on Trees and Shrubs” by Johnson and Lyon are two that I use often.



A related and very important question is “Are other species of trees in this general area affected by this same disorder?” If several different species are involved the problem may have more to do with environmental conditions than any specific disease. Earth moving equipment can change the topographic grade that leads to a

change in soil drainage. Similarly, a general site disturbance such as construction may adversely affect all the trees present on a given site. If the pines, maples, oaks and hemlock are all dieing on a site the problem is not likely caused by a specific disease or insect.

Finally, it is important to realize that the fate of a single tree is not necessarily an indicator of the overall health of the forest. As a field reverts to forest there may be as many as 7,000 to 10,000 tree stems present per acre initially. In 80 to 100 years that same acre of what is now a forest will have perhaps 200 to 400 stems left due to natural mortality. All those other trees have to die for some reason or another because any given acre of land only has so much nutrient and growing capacity! In order for the average tree diameter to increase just one inch within a forest, approximately 1 in 5 of the existing trees must die.

So, the bottom line is that any isolated case of a tree dieing in a forest is not necessarily a cause for concern. With a little training and knowledge of common tree disorders the exact cause of death may be determined or maybe not! It is more important to focus on the entire forest and not just specific trees.

Your local office of Cornell Cooperative Extension can help you submit samples of unhealthy trees to Cornell University's Plant Disease Diagnostic Laboratory. For additional information on forestland activities that will benefit your objectives, visit Cornell's forestry website at [www.ForestConnect.info](http://www.ForestConnect.info), contact your local office of Cornell University Cooperative Extension, or join the New York Forest Owners Association through their website at [www.nyfoa.org](http://www.nyfoa.org). Source: MJ Packer, New York Forest Owners Association and Peter Smallidge, Cornell University