

Fertilizing Established Trees

Why feed trees?

In nature, forest trees are fertilized by the nutrients recovered from leaf litter and other organic material. This natural process rarely takes place in planned landscapes, so nutrients in the soil must be replaced by regular fertilization. (Some textbooks correctly point out that fertilizer is not "plant food." Technically, plants make their own "food" through photosynthesis. Fertilizer simply provides the nutrients necessary for that and other metabolic plant processes.)

Sure, most trees survive without regular fertilization. However, they will not normally reach their full potential. Regular "feeding" will help trees grow to full size, live longer, and have a more attractive appearance. Also, the best defense against insect, disease, and other problems is a vigorously growing, well-fed tree.

Fertilizer Basics

Nutrients can be divided into three categories—primary, secondary, and micronutrients—but what does this mean?

Primary Nutrients: These are represented by the analysis (the big numbers on your bag of fertilizer such as 10-10-10 or 12-6-6. In order, these numbers represent the amounts of nitrogen, phosphorous, and potassium (the primary nutrients) in a particular fertilizer. These are called primary nutrients because they are the ones most needed by trees, in volume.

Secondary Nutrients: These are not shown in big numbers but should be part of the "guaranteed analysis" shown on the fertilizer bag. Secondary Nutrients are needed in significant, but lesser, quantities, and include calcium, magnesium, and sulfur. Fortunately, these elements can easily be added by applying dolomitic limestone and/or gypsum.

Micronutrients: Often overlooked and needed in lesser amounts, these nutrients provide for the synthesis of chlorophyll and the activation of other enzymes essential to the use of nitrogen and the overall growth process. Micronutrients include Boron, Copper, Iron, Manganese, Molybdenum, and Zinc.

Slow vs. Fast Release

Fast release fertilizers can serve a valid purpose when trees are in distress and need emergency attention. More often than not, however, fast-release equals fast disappearance. Most of the time, a slow-release formula (with limited fast-release capability) is best for fertilizing trees. Rather than a short, intense "feeding," trees do respond better to a slower, more measured release of nutrients over a period of months rather than weeks.

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The analysis indicates the percentage, by weight, of the primary nutrients contained in a fertilizer. For example, 12-6-6 means that 12% of the bag is nitrogen and that phosphorous and potassium take up 6% each. The remaining 76% of the bag's contents consists of other nutrients and filler.

Some soil tests recommend using pounds of nutrients rather than pounds of fertilizer. In order to determine how many pounds of nutrients are in a fertilizer, multiply the number of pounds in the bag by the percentage represented by the analysis.

For example, with a 12-6-6 analysis and a fifty pound bag of fertilizer, the pounds of nitrogen can be determined by multiplying 50 x .12 to equal six pounds of nitrogen. Likewise, the pounds of potassium and phosphorous in the same 12-6-6 fertilizer bag are found by multiplying 50 x .06 to equal three pounds of each.)

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What Kind?

Research indicates that the nutrient most needed for growth is nitrogen. As a result, the favored analysis is two to three times nitrogen compared to phosphorous and potassium. Our favorite for this analysis is Espoma Plant~Tone. Not only is the mix of primary nutrients correct and slow release, but Espoma PlantTone contains all of the micronutrients mentioned above.

When?

An annual application of the recommended fertilizer in March -April should be sufficient to sustain adequate energy and growth throughout the growing season.

How?

For trees growing in mulched, forested or similar locations, simple surface application will do the job. Just spread the granular fertilizer on the ground evenly around the edge of the tree's canopy (dripline). Do not put fertilizer within one foot (minimum) of the trunk.

For trees growing in turf, fertilizer is best applied beneath the root zone of the grass. Punch, drill, or dig small holes 8-12" deep evenly spaced around the dripline (about 3 feet apart) and distribute the fertilizer equally among the holes. Then cover or fill in the holes. This method puts the nutrients into the tree's root zone and avoids burning or over stimulating the grass (and wasting fertilizer).

How Much?

One cup of Espoma Plant~Tone per foot diameter of the tree's branch spread should be sufficient for surface applications. When applying beneath grass as described above, two-thirds of a cup per foot of branch spread should do the trick.

Remember: Your trees are the most enduring, the hardest-working, and often the most valuable elements of your landscape. They protect you and your home from heat and wind, reducing energy costs and cleaning the air while beautifying the world. Isn't a good, square meal the least they deserve?

