



Fertilizing Trees and Shrubs

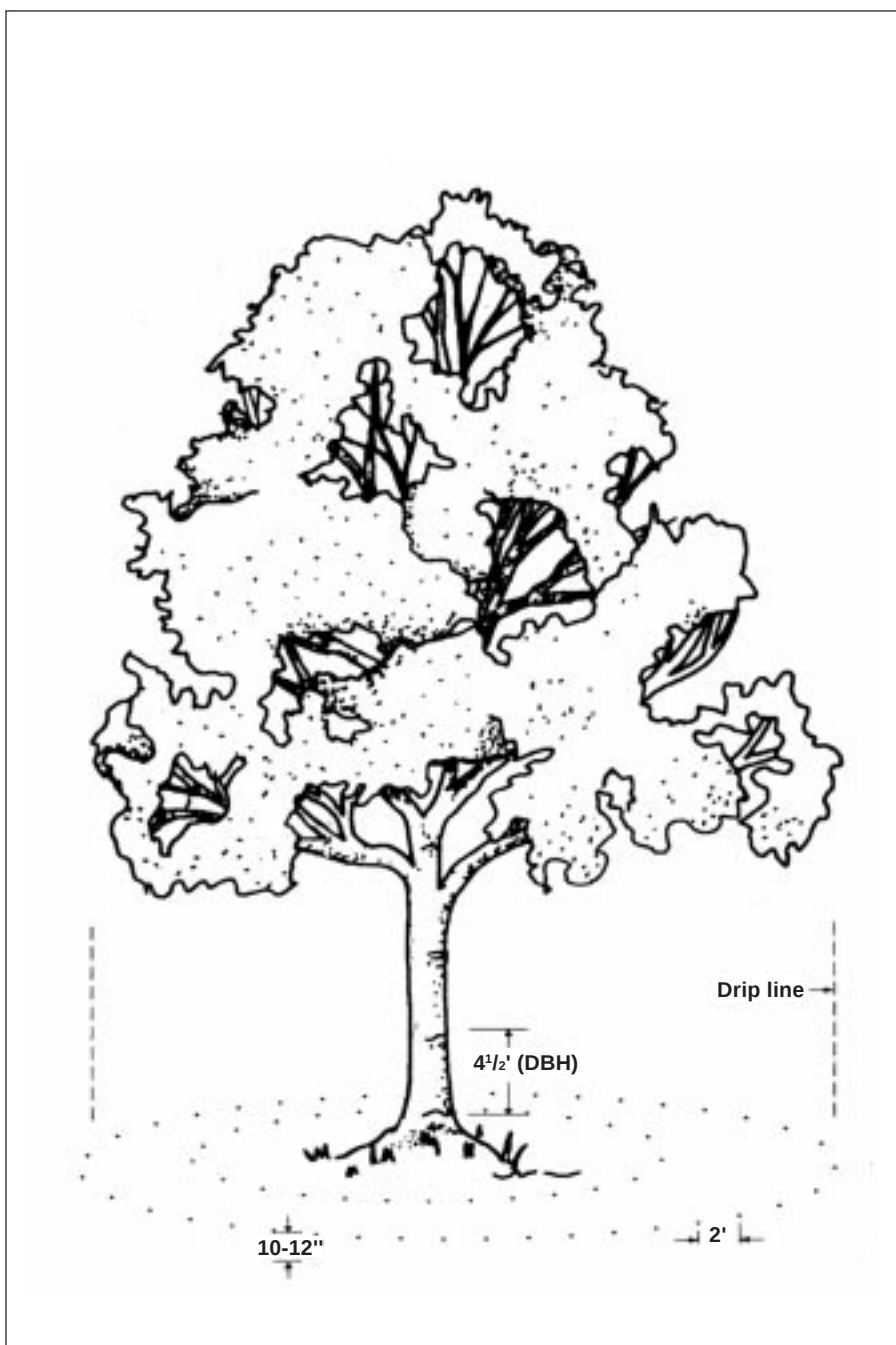
Shade and ornamental trees and shrubs often benefit from added fertilizer. Fertilization can result in more rapid growth; faster recovery from injury, pruning, or pest problems; improved health and better foliage color. Trees growing in modified *urban* soils usually will benefit more than those growing in good *agricultural* soils, so if you live in a “development area,” a fertilizer program for your trees probably will pay big dividends.

Fertilizers are best applied during the dormant season (usually November through April). A second-best time is during the spring and early summer months (May through July). Do *not* fertilize between July and November.

Newly planted trees are not routinely fertilized in their first growing season. The use of a low-analysis starter solution is an exception. After the first year fertilizer can be applied easily in granular form via holes distributed throughout the root zone. A soil auger, punch bar, soil probe, or large drill bit can be used to make the holes. A hole $1\frac{1}{2}$ – $2\frac{1}{2}$ inches in diameter is ideal.

The first row of holes should be made at the drip line (see illustration). The holes should be about 10–12 inches deep, slanted slightly toward the tree trunk, and about 2 feet apart. Additional rows should continue the 2-foot row spacing. No holes should be dug closer than 18–24 inches from the trunk. If a root is struck during digging, remove the bit and dig to one side or the other.

Fertilizer rates are based on the diameter of the tree measured $4\frac{1}{2}$ feet above ground. (Diameter equals circum-



ference divided by 3.14.) Use the following formulas to determine the correct amount of fertilizer:

For a tree 6 inches in trunk diameter or less (measured 4½ feet above ground): apply 1–2 pounds of 10-6-4, 10-20-0, 12-12-12, 6-10-4 or a similar low-analysis fertilizer per inch of trunk diameter. (For example, a 4-inch-diameter tree will require 4–8 lbs. of 10-6-4 fertilizer.) Any complete fertilizer containing 6–12 percent available nitrogen is acceptable. High amounts of phosphorus and potash are not necessary

For a tree over 6 inches in diameter, apply 3 pounds of 10-6-4 or a similar low-analysis fertilizer per inch of trunk diameter. (Example: an 8-inch-diameter tree will require 24 pounds.)

Distribute the required amount of fertilizer evenly among the holes, placing no more than ¼–½ cup of fertilizer in each hole. If you have fertilizer left over,

drill more holes. Water until the holes stand full of water. The holes can then be filled with soil or a mix of soil, sand and peat moss.

Pine, redcedar, spruce and fir trees should rarely be fertilized. These trees grow quite well in a wide variety of Kansas soils—unless they are too wet. Even in very poor sites adapted pine varieties and redcedar can be expected to do well without soil amendments. However, if evergreen trees are fertilized do not exceed half of the recommended rate for deciduous shade and ornamental trees.

Seldom do flowering or evergreen shrubs require chemical fertilizers. Usually these plants tend to grow faster and larger than desired anyway. Additional soil nutrients will only compound the situation. In cases where soil tests or foliage-growth symptoms indicate that established shrubs need additional soil nutrients you may use up to ½ pound

of a low-analysis fertilizer per foot of height or spread, whichever is greater. For example, a 6-foot-wide spreading juniper could use up to 3 pounds of fertilizer, while a 4-foot-high flowering shrub could use up to 2 pounds of fertilizer.

Spread the fertilizer evenly around the plant, covering the surface area below the branches, then incorporate into the soil. Follow with a thorough watering. Timing of fertilizer applications is the same as for shade and ornamental trees.

Soil injection of water soluble fertilizers is an excellent way to fertilize trees. Most “injectors” attach to the garden hose and are very easy to use. Their use does not require the drilling of holes as with dry fertilizers. Liquid “root feeders” are available from lawn and garden supply stores. Follow manufacturer’s directions carefully.

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L-707 Revised

October 1992

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File Code:Forestry 1-2

JH10-92—5M; 10-93—5M; MS8-95—4M