

# SOIL TEST INFORMATION SHEET NO. H-850

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## Trees

1. Recent research shows that trees should be fertilized based on the spread of its root system rather than by the method based on trunk diameter.
2. February and March are the ideal months to fertilize healthy, established trees. If a tree is unhealthy, lacks vigor, or is in an obviously stressful environment, fertilize after leaf-out in April or May.
3. Do not apply nitrogen fertilizer to recently transplanted trees. Any fertilization that is done in the first two years after planting should be conducted to promote root establishment and growth.
4. When determining the amount of fertilizer to apply, be aware that trees with columnar shapes (pines, magnolia, bald cypress) have roots that extend three times farther than the reach of the branches. Trees with broad shaped crowns (oaks, maples, elms) have roots extending twice as far as their branches.
5. The first step in determining the amount of fertilizer to apply is to determine the number of square feet in the tree's root zone.
  - a. For columnar shaped trees, multiply three times the distance from the trunk to the tip of the farthest branches, square that number, and multiply by 3.14.
  - b. For broad shaped trees, multiply two times the distance from the trunk to the tip of the farthest branches, square that number, and multiply by 3.14.
6. After calculating the number of square feet in the root zone, apply fertilizer at the rate of 3 pounds of nitrogen per 1000 ft<sup>2</sup>. For example, apply 15-5-10 at the rate of 20 pounds per 1000 ft<sup>2</sup>, 8-8-8 at the rate of 40 pounds per 1000 ft<sup>2</sup>, or 13-13-13 at the rate of 25 pounds per 1000 ft<sup>2</sup>.

Mature evergreen trees can be fertilized at the rate of 1-3 pounds of nitrogen per 1000 ft<sup>2</sup> every 3 years, while mature deciduous trees can be fertilized at the rate of 3-6 pounds of nitrogen per 1000 ft<sup>2</sup> every 3 years.
7. If a lawn or ground cover is present under the tree or in the root zone area, do not apply fertilizer in excess of one pound of nitrogen per 1000 ft<sup>2</sup>. This means that the rate should not exceed 7 pounds of 15-5-10, 8 pounds of 13-13-13, or 12 pounds of 8-8-8 per 1000 ft<sup>2</sup>. This applies to broadcast (over the soil surface) application of fertilizer.
8. Placing fertilizer in drilled holes is the most highly recommended application method. Make holes 2" in diameter and 10-12" deep. Holes need to be 2-3" apart in concentric rings around the tree. Be sure to extend holes past the dripline and do not fertilize near the trunk since the tree's feeder roots are at the dripline and beyond. Divide the fertilizer to be applied evenly between the holes and water in.
9. For newly transplanted trees be careful with "root stimulator" applications. Follow label directions. Do not exceed the recommended application rate or recommended frequency of application.
10. Contact your county agent for additional information and help in your fertilization program. The agent also receives a copy of this report for the parish office files.