

tough, drought-resistant species, may restrict growth. Black plastic beneath the mulch made little difference in weed problems and provided no additional benefit to the plants compared to mulch alone.



**Figure 2.** Many fine roots were observed in the interface between plastic and soil on all species.

Species such as Burford holly and sawtooth oak respond to improved moisture conditions but also need adequate oxygen to the root system. In

geographic areas of heavy soils, high rainfall, or where irrigation is practiced, the detrimental effect of the plastic would probably be greater due to lower oxygen levels in the soil. The oxygen level in the soil is probably less critical the first season, but as the roots develop a greater deficiency occurs.

Little fertilizer response was detected the first growing season and only a moderate response during the second. However, by the third growing season the plants had developed sufficient root systems so as to be less drought sensitive and better able to absorb and utilize the higher fertilizer levels. This should not be interpreted to mean that newly planted trees or shrubs should not be fertilized, but rather that the visual response to the fertilization at planting may not be seen for several years.

*Department of Horticulture  
Oklahoma State University  
Stillwater, Oklahoma*

---

## ABSTRACT

Shank, Bruce. 1978. **Growth of tree fertilization linked to professional methods.** *Weeds, Trees & Turf* 17(8): 14-16.

The success of lawn care companies suggests that property owners are aware of the increased value of their landscape. The same complete care package could work well for trees. The package could be pruning, fertilization, and repair of winter damage in the spring; insecticide and fungicide treatments in late spring and summer, and mulching, fertilizing, and necessary winter preparation in the fall. The entire program could be one contract at a price per visit. The success of lawn care spray rigs can be attributed to speed of application, rapid and dramatic improvement in the customer's lawn, the outdoor advertising value of the tank truck, professional brochures, and the ability to plan routes accurately and efficiently. These same reasons for success can be utilized in tree care, when a dominant technology is chosen by professionals and recognized by the customer to be professional. The tree care industry needs its sign of professionalism for tree fertilization. The most unique method having the characteristics necessary for customer identification is the soil injection method. If this method could be developed into a route similar to lawn care, there may be great potential.