

Mulching Tree Leaves into Turfgrasses

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The state regulation which prohibits sending yard wastes to land fills has created a problem for homeowners and others who want to dispose of tree leaves each fall. One alternative is to compost the leaves, either in the yard or at a local composting center. The latter requires collection, bagging, and a means of transport to the compost center. The former necessitates a portion of the yard devoted to the composting. Another means of disposal is simply mowing the turf often enough to pulverize the leaves so they fall into the turf. A legitimate question is what effect does this have on the turf, both short-term and long-term?

With these questions in mind a study was initiated in October 1990 to evaluate the effects of mulching tree leaves on a Kentucky bluegrass turf. Leaves from a mixed stand of trees but predominantly maple were collected. Three leaf rates applied were: none, light (about 3 inches of dry leaves), and heavy (about 6 inches of leaves). The leaves were mulched into the turf with a mulching mower using two passes. With the heavy rate, much of the grass was covered with the mulched leaves. Two nitrogen rates were used as well: 2 or 4 pounds N per 1000 sq. ft. annually with 1/4 of the total applied at the time of leaf mulching.

A second study was initiated in October 1991 in which oak and maple leaves were applied to a Kentucky bluegrass turf. A single rate of leaves was applied. There were 4 replications of each treatment in each study. Both studies were conducted on turfs in the open sun.

As we have evaluated the turf throughout the growing seasons, there have been no meaningful differences observed in turf quality ratings, turf density, thickness of the "thatch" layer, amount of organic matter in the thatch layer, or the number of dandelions in the plots. The nitrogen applications provided some improvement in turf quality ratings, but there was no apparent effect on the rate at which the leaves decompose.

From the data collected to date, it appears that returning leaves to the turf is not harmful to the turf if the mulching is done regularly. It is important to use a mower which pulverizes the leaves well and that the leaves are dry when mowed. Sharpening the mower blades will help to grind the leaves finer. The finer the leaf particles, the more easily they fall into the turf, leaving grass leaves exposed to the sunlight. Our observation is that the pulverized leaves will settle into the turf within a day or two, particularly if followed by a rain. Take care that the pulverized leaves do not cover the grass blades entirely. Although additional nitrogen has not shown any major benefit, we still suggest 1/2 pound nitrogen per 1000 sq. ft. in addition to the normal fall and late fall nitrogen fertilization to enhance decomposition of the tree leaves.