

## GRASS AROUND TREES INHIBITS GROWTH, BUT NOT FOR THE REASON YOU MAY THINK

Turfgrass growing close to the stem or trunk of a woody ornamental can inhibit the plant's growth, and two scientists looking for the exact cause of the supression have found that it is due, in part, to chemicals exuded from the grass roots — the process of allelopathy. Until now it was supposed that the growth supression was caused by competition for moisture and nitrogen, with the grass taking up the nutrients before they percolated down to the roots of the tree or shrub.

To conduct their research, R.C. Wakefield, a professor of plant and soil science at the University of Rhode Island, and S.L. Fales, a research associate, grew flowering dogwood and forsythia plants in plots both with and without turf cover. They were not surprised to find that the plants with no turf cover performed better, but additional water and fertilizer didn't help the supressed (turf-covered) plants increase their growth rate. To see if allelopathy was partially to blame for the differing growth rates, the scientists leached some chemicals from the roots of various species of grass (perennial ryegrass, red fescue and Kentucky bluegrass) and applied the leachates to potted forsythia plants growing in greenhouse sand culture. Very shortly the liquid slowed the growth of the plants, demonstrating that allelopathy was at least partially to blame.

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