A PRACTICAL RESEARCH DIGEST FOR TURF MANAGERS

TURFGRASS TRENDS

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BACK-TO-BASICS

Understanding the Turfgrass Crown

By Richard J. Hull

This is the first of a three-part series on turfgrass morphology, function, physiology and management implications. This series will feature crowns, leaves and roots, all vitally important parts of turfgrass plants. Today we will concentrate on turfgrass crowns.

In his recent textbook on turfgrass management (1998), Nick Christians states, "The crown is the center of activity for the turfgrass plant, and as long as it is alive the plant is alive."

If anything, this is an understatement. The crown literally is the turfgrass plant, or at least that which makes a turfgrass a perennial plant. The primary growing points (meristems) are located in the crown which means all grass organs originate from the crown. Most of the energy reserves of a turfgrass plant are stored in its crown.

During the winter and even during drought-induced summer dormancy, the crown may be the only part of a grass plant that survives. Considering all this, it may appear strange that most turf folks rarely think about the well-being of grass crowns when developing a turf management program.

Leaves are certainly considered when deciding on a height of cut and the impor-

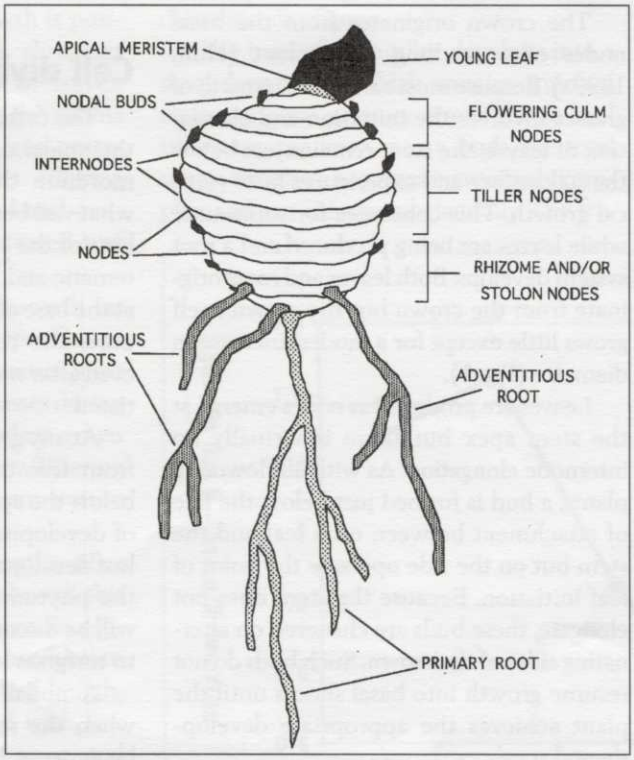

Figure 1. Stylized image of a turfgrass crown with nodes identified that will contribute to a flowering culm, produce tillers, and give rise to rhizomes or stolons. Only the flowering culm internodes will elongate. Roots are much reduced for a crown old enough to have so many nodes. All but the youngest leaf are removed.

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