

TURFGRASS TRENDS

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AGRONOMY

Soil Organisms And Their Role In Healthy Turf

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What are the basic assumptions about growing plants by which we've been operating? We have assumed that plant nutrition is a relatively easy process and if we add chemicals at the right time, in the right place, and the right amounts, we can supply all the nutrients plants require and at the rates plants require. We thought we understood plant nutrition well enough to supply these needs. In fact, we now know that plants are much more complex than we thought.

Plant growth requirements have not been met by placing just enough nitrogen, phosphorus, and potassium for the whole of a plant's growth in the soil at one or a few times. We seem to have forgotten that plants require a host of nutrients, from boron to zinc, in small amounts that vary through the course of their active growth cycle, and for some perennial plants, even through dormant periods.



Plant roots colonized internally by beneficial symbiotic fungi called Vascular-
Arbuscular Mycorrhizae or "VAM" fungus. Parts of the VAM fungus reach out into the
soil to collect phosphorus, other nutrients and water, which are transported back for
use by the host plant. Where VAM is present the plant is protected from root rot disease
and parasitic nematodes.

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