

By Bob Tracinski,
master gardener

The war beneath your grass

Help your lawn's root
system battle invaders

Deep in your lawn there are hidden recesses harboring an amazing kingdom of strange beasts locked in combat for survival. At the threshold of this kingdom, just below a forest of green grass blades, lies a barren thicket of twisted dead roots and leathery leaf debris. This is the Land of Thatch.

Thatch should be about a half-inch deep to insulate and retain soil moisture, and to cushion against the shocks of wheels and running feet. If thatch is deeper, it can shelter insects and hideous fungal diseases that attack the grass plants.

World of soil. Under the Land of Thatch lies the subterranean World of Soil tunneled by biting ants and angry ground hornets. Air ducts are carved out by slithering worms, called “nature’s aerators” because they help the ground breathe. Microscopic, threadlike nematodes mingle invisibly with tiny spider mites, miniature millipedes, chiggers and pill bugs.

Down in this dark world lies the Root Zone—the strings of tissue that take nutrients

and minerals from the soil and combine them with air and water to feed the green grass blades that bask in the sun way up above.

The tangle of roots might support a colony of curled white grubs that suck nutrients from the roots. The grubs and earthworms might attract moles that dig channels in search for food. It used to be thought that removing the grubs with a pesticide would discourage moles, but that remedy doesn’t always work. It’s hard to eliminate every grub, and moles eat other things. Poison peanuts and mothballs are not effective. Trapping can work, but permission must be granted by a game warden in some areas. The easiest control is a good mole-digging cat or dog.

Mixed through the soil are microbes busy at work turning bits of dead tissue into nutrient-rich humus.

What’s the moral of this Gothic tale? We never think that the well-being of our beautiful lawn is determined by a nightmarish world below our feet. Grass roots must be fortified to ward off a host of monstrous predators.

Grass roots need three kinds of weapons. Nitrogen promotes leaf growth and provides a healthy green color. Phosphorus sustains healthy root development. Potassium gives the plants disease resistance. These weapons are magically converted to life-sustaining sugars that give the grass plants the power to overcome adversaries.

Fertilize in the fall. In autumn, grass plants change their strategy for survival. They use less of the sugar to promote leaf growth in order to store more food in the Root Zone. This stored sugar helps the lawn’s root system spread and grow during the cold months in order to be in fighting condition to battle the subterranean beasts in spring.

That’s why it’s so important to fertilize in autumn. That’s the secret of a healthy stand of grass. The fall application of fertilizer gives the Root Zone all the ammunition it needs to thrive in a dark, mysterious world of hidden horrors in order to cheer up our world with a bright carpet of green. ■



Bob Tracinski was certified as a master gardener by the Cooperative Extension Service in 1984. Since then, he has written many gardening articles, and he has appeared on radio and television. Illustration by Paul Lange.