



What Is An Endophyte, And How Can It Benefit Your Turf?

The term endophytic describes a situation where one plant lives inside another in a mutually beneficial or symbiotic relationship. With respect to grasses, an endophyte is a type of nonpathogenic (unharmful) fungus that lives within the tissues of a particular grass plant. As a result, the endophyte spreads into developing seed heads where it is further distributed by seed. Endophytic fungi are found in fescue and ryegrass species. There are no visible signs of grasses infected with endophytic fungi, but this is one infection from which these grasses derive benefit.

Fescue and rye grasses infected with endophytes demonstrate improved performance under stressful conditions caused by deficiencies in irrigation and fertilization, and

offer improved resistance against other fungal and insect infestations. In particular, the alkaloids produced by endophytic grasses offer resistance against foliar feeding insects such as billbugs, chinch bugs and sod webworms.

While endophyte infection has proved beneficial in the turf realm, it is not beneficial for pasture grasses. Pasture grasses infected with this fungus can cause bloating and other non-threatening but serious conditions to grazing livestock. Thus, in pastures, endophyte-free seed needs to be planted. Such seed is available through Stover Seed.

For turfgrass situations, certain varieties of Tall Fescue and Perennial Ryegrass have shown high concentrations of endophytes. Such varieties can be sourced, but it is important to note that endophytes cannot survive for long periods in the seed stage therefore the sooner the seed is planted, the better chance the endophyte will survive and spread throughout the plant population.



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1415 East 6th Street • P.O. Box 861715 • Los Angeles, California 90086
Phone: (213) 626-9668 • Toll-Free: (800) 621-0315 • Fax: (213) 626-4920
www.stoverseed.com