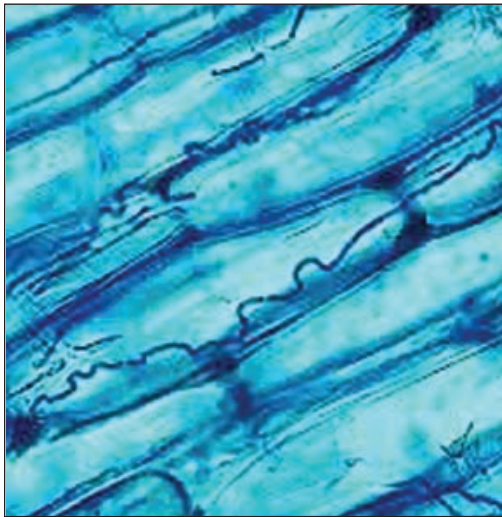


# Jonathan Green

FOR THE BEST LAWN & GARDEN IN TOWN



## Endophytes Make A Difference



### The Way Endophytes Work

While living off its grass plant host, endophytes produce defensive chemicals - alkaloids - that are toxic to enemy insects. One effect of these toxic alkaloids is that the plants taste bad. This causes insects to spend more time moving and less time feeding, thus making the insects more vulnerable to predators and pathogens. Newly hatched larvae and nymph's also are more prone to starve in endophytic lawns. Additionally, endophyte-infected plants produce lower amounts of aromatic compounds that are known to attract insect pests. In other words, in addition to tasting bad to the bad bugs, endophytes may actually "hide" their host from certain insect enemies.

### The Benefits of Endophytes

1. Effective against above ground pests, as well as below ground insects and plant-parasitic nematodes.
2. Increases summer performance and tolerance to drought and heat.
3. Helps plants better compete against common weeds and dicots (including crabgrass, dandelions, plantain, and clover).
4. Enhances disease resistance by maintaining plant health.
5. Increases the range of environmental adaptation.
6. Increases seed survival, germination and establishment.
7. Improves performance in poor quality acidic soils and soils with low phosphorus content.
8. All natural and does not diminish over time; reduces the need for frequent pesticide treatments.
9. Helps deter annual bluegrass weevils, armyworms, bluegrass billbugs, chinch bugs, hairy chinch bugs (these must be the chinch bugs ugly cousins!), black and bronzed cutworms, greenbug aphids, bluegrass and larger sod webworms, Japanese beetles, and southern masked chafers.



Black Beauty Sod at 4 months old. The invisible waxy coating on the Black Beauty grass blade preserves the moisture in the leaf and wards off turf disease. The waxy coating on an apple performs much the same function.

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