



Rain: A Precious Resource

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Turfgrass is incredibly resilient and adapts to a wide range of environments from putting greens to low-maintenance roadsides. Turfgrass plants have physiological pathways that help them tolerate a variety of stresses such as drought, heat or salt stress. When stress is alleviated, the physiological pathways that allow turfgrasses to tolerate stress can slow or stop, resulting in dramatic changes in turfgrass growth – e.g., the change in turfgrass growth as weather patterns transition from drought to periods of abundant rainfall.

Superintendents find themselves wishing for rain during dry summers because no hormone, biostimulant, fertilizer or fungicide is going to have the same beneficial effects as clean, penetrating rain. One good rain after an extended dry period can have dramatic effects, practically transforming seemingly dead grass to lush green turf overnight. The environmental change when rain returns triggers a physiological switch that causes turf to move stored carbohydrates into top growth. However, rapid growth after a soaking rain can paint a deceptive picture of turf health, because rampant growth may occur at the expense of root health.



Irrigation cannot replicate the water quality and uniform delivery of rainfall. Eventually, drought will have visible effects on a golf course.

Here are a few things to be aware of when the weather transitions from drought to more normal rainfall:

- Lack of water is a great growth regulator. When dry conditions suddenly end, turf growth will rebound, causing lush top growth and potential scalping issues.
- Turfgrass transitioning from near dormancy to rapid growth is a signal for opportunistic pests like nematodes, fungi and insects.
- Most fungi are sensitive to ultraviolet light and will retreat to moist areas during drought conditions.
- When conditions become more hospitable for fungus and turfgrass alike, some pathogenic fungi – e.g., brown patch, *Rhizoctonia solani*, leaf and sheath spot, *Rhizoctonia zeae* and dollar spot – can proliferate and cause low-level infections without visible symptoms. Playing catch-up with fungicide applications can result in lower-quality turf at a higher cost than maintaining a minimal preventive program during the stress period.

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