

Cover Photo:  
Rolling can improve  
green speed and  
smoothness.



Oscillating fans are a popular new tool used in golf course maintenance programs. See page 9.



Weather stations located on the golf course provide valuable information that is used in irrigation programs. See page 18.

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## The Ups and Downs of Rolling Putting Greens

A practical guide for developing a rolling program.

By Chris Hartwiger

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## Water Quality Monitoring at Queenstown Harbor

The results of five years of groundwater monitoring on a golf course located in an environmentally sensitive area.

By Frank Wm. "Bill" Shirk

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## Optimizing the Turfgrass Canopy Environment with Fans

Fans can help overcome poor growing environments.

By Patrick M. O'Brien

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## Physiological Management of *Bipolaris sorokiniana* Leaf Spot Symptom Expression by Kentucky Bluegrass

A unique approach to disease management that involves suppression of visual symptoms.

By Dr. Clinton F. Hodges

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## Hand Watering Greens

There is a correct way.

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## Thirsty Turf

A short course in water conservation.

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Making better choices of new bentgrass varieties.

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## Turf Twisters