



Photo by J. Kuddes

Soil Physical and Chemical Characteristics of Aging Golf Greens

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Objective

Monitor changes in physical and chemical properties of greens over time.

Summary

As greens age, they undergo physical and chemical changes which may affect management practices.

Four experimental greens were constructed following USGA recommendations in sequential years from 1997 to 2000. Treatments included two root zones, 80:20 (v:v) sand and sphagnum peat and 85:15:5 (v:v:v) sand, sphagnum peat and soil (silty clay loam), and two grow-in programs, accelerated and controlled.



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Results

- Water infiltration decreases as a sand-based root zone matures, possibly because of fine particles from topdressing sand.
- Adding soil to the root zone does not decrease infiltration with maturity, and soil may be an economical alternative to peat in root zone construction.
- Beyond the grow-in year, phosphorus was the only element that accumulated in the root zone from initial applications during establishment.
- Nitrogen and phosphorus begin to accumulate in the later years of a green's maturity, indicating the potential for decreasing these inputs as greens mature.

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