Quantifying Turfgrass Parameters Using Digital Image Analysis. (C05-karcher102541-Oral)

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Abstract:

Turfgrass researchers customarily use subjective ratings to evaluate turfgrass responses to treatment effects. Subjective ratings are often used because alternative objective methods either do not exist or require significantly more time and labor. Tools are available that are capable of extracting information from digital images of turf so that parameters such as percent cover, color, and disease incidence can be objectively quantified. Studies conducted at the University of Arkansas have demonstrated that digital image analysis of the aforementioned parameters was significantly more accurate and precise compared to subjective ratings. With the use of image analysis software and customized macros, digital image analysis of turf responses requires similar time as subjective ratings. Furthermore, highly trained personnel are not required when using digital image analysis, in contrast to subjective ratings. Hardware and software requirements will be discussed and digital image analysis methods will be demonstrated through the use of several example analyses.

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