

In Digitized Photos of Turfgrass Plots

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Author: [Steven C. Wiest](#)¹

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Abstract/Excerpt

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Digitized photographic images of turf plots composed of bermudagrass, buffalo grass, tall fescue, and zoysiagrass were taken at a height of about 150 cm with a 28-mm lens. Fast Fourier transforms of these images were performed, and a radial plot of the power spectrum was obtained from each image. Hurst plots (log frequency vs. log intensity) were used to subtract “background” from the power spectra, so peaks would be more evident. The peak of the power spectrum occurs at the average spacing between leaves (more precisely, between areas of the canopy that reflects a significant amount of light) and defines the characteristic dimension. Zoysiagrass had the lowest characteristic dimension, while tall fescue had the highest. The width of the power spectrum is indicative of the variability of the characteristic dimension within the canopy. The minimum characteristic dimension (occurring at the highest frequency) was less than 1.7 cm, whereas all the other species had about the same minimum characteristic dimension of ≈ 1.9 cm. The maximum characteristic dimension was greatest for fescue (6.9 cm), followed by buffalo grass (3.8 cm), bermudagrass (3.3 cm), and zoysiagrass (2.8 cm). These results indicate that the characteristic dimension can be a useful tool for discriminating between turfgrass species in digitized images.

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The traditional narrative-compositional forms are narration about events (narrative proper), description, and the narrator's voice merges with the voice of a character or characters is sometimes called free indirect style, but without totally surrendering authorial participation in the discourse. E.g. "She had her work cut out for her. The species composition of forests depends on the annual amount of precipitation, distribution, and the ratio of precipitation to potential evaporation. Water supply also affects biological productivity (NPP) varies from as much as 3000 g m⁻² in wet regions to 250 to 1000 g m⁻² in semiarid regions (Turner, 1978). In the central United States annual rainfall of at least 380 mm is needed to support a closed forest. Characterizing the interactions between turfgrass and tree species in these landscapes is challenging due to less nutritional and water resources, while maintaining satisfactory appearance. A study was conducted to evaluate turfgrass and tree species in a constructed landscape of the Intermountain West. Images were analyzed to determine the area of turfgrass and tree roots. This research shows that root growth differences occur in turfgrass and tree species. Tubes vary greatly in composition, orientation to target plants, length, shape and width/diameter. These findings have implications for turfgrass practices. Some of the main characteristics of arthropods include: Have an exoskeleton. Segmented body. Sensory organs - These allow them to detect changes in humidity and chemical composition. Have a pair of antennae. Their bodies consists of a head and segmented trunk. Depending on the species, Crustaceans are found in both aquatic environments. As such, they also greatly vary in their size, form, habit and life cycle among different groups of Crustaceans. Class Branchiopoda. These characteristics become more evident as the turf matures. Some of these improved cultivars also have darker green color, improved disease and drought tolerance, and a better habit. Experts recommend planting a blend of two or three cultivars rather than seeding just a single cultivar for a better chance of withstanding a variety of challenges.



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