

support less top growth when the mowing height is lowered. Less rooting following a lower mowing height is why golf greens need to be watered frequently, many times on a daily basis, and why frequent fertilizer is applied since the shallower roots have a decreased depth to obtain moisture and nutrients from the soil. Root growth is least affected when no more than 30 to 40% of the leaf area is removed at one mowing.

Other influences on mowing height and frequency include shade, type of mower being used, season of year, and environmental stresses imposed upon the grass. Under shady conditions, grass leaves grow more upright in order to capture as much of the filtered sunlight for photosynthesis as possible. Mowing height for grasses grown under these conditions need to be raised at least 30- per-

cent in height of that normally used in order to capture enough sunlight to support the plants. If mowed continuously short, grasses grown under shaded conditions gradually thin.

Mowing height is also influenced by the mower type being used. Rotary and flail-type mowers cut best at heights above 1 1/2 inches. Conversely, reel mowers cut best at heights below 1 1/2 inches. Reel-type mowers predominate those used on a golf course play areas while rotary and flail mowers are used mainly in roughs and out-of-play areas.

Mowing height may also be influenced by the season of year or by environmental stresses imposed upon the turf. In early spring, turfgrasses tend to have a more prostrate (decumbent) growth habit, therefore they can be mowed closer than other portions of the year without serious consequences. Close mowing in early spring also controls thatch, increases turf density, removes excess residues or dead leaf tissue and promotes earlier green-up. Green-up is hastened because close mowing removes topgrowth and dead tissue that shades, thus cools, the soil surface. Consequently, greater amount of solar radiation reaches the soil surface resulting in the soil surface warming up more quickly than if the top growth is allowed to remain tall. In summer, when days are longer, the grasses tend to have a more upright growth habit and are healthier if the mowing height is raised to compensate for it. Higher mowing height at this

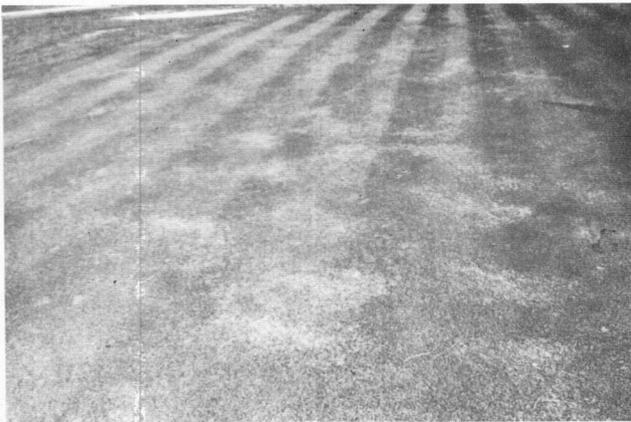


Fig. 2. Scalping results in excessive clipping debris, turf discoloration and reduced rooting.

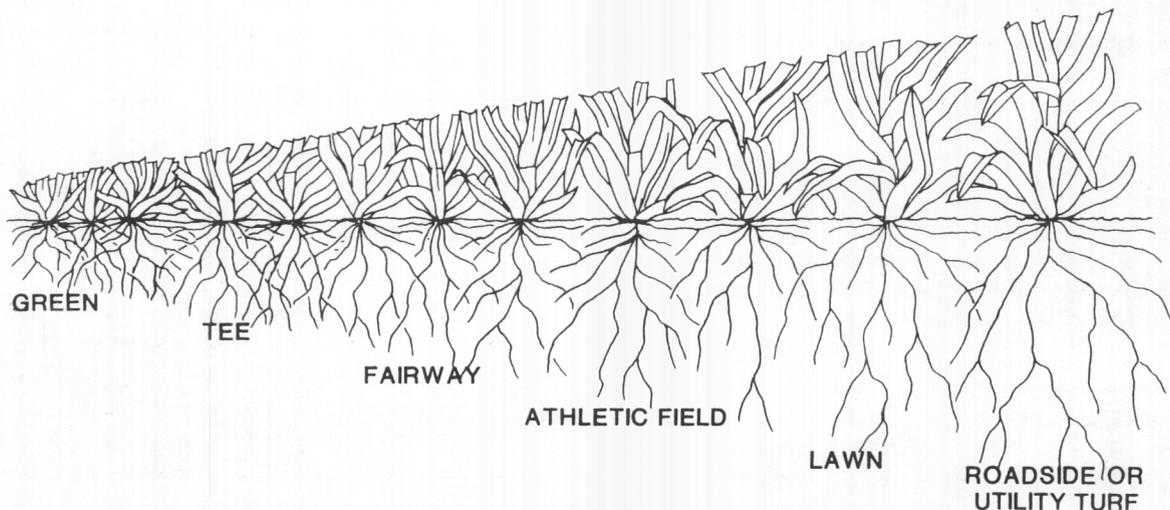


Fig. 3. A direct relationship exists between mowing height and turf rooting. Higher mowed grass generally require less additional watering and nutrient applications.