Effects of Traffic on Dormant Bermuda

Well established dormant bermudagrass can withstand considerable traffic during the winter months. However there are certain conditions that warrant the removal of as much winter traffic as possible:

--Traffic when the soil is saturated will cause a portion of the root system to be dislodged. When this happens, winter kill is inevitable. This is certainly most risky in poorly drained areas, after heavy rains, and during late fall and winter months when the soils stay wet for long periods of time. When the evapotransporation rate is very slow, it takes weeks sometimes for the soil to dry out in low, heavy clay soil situations.

--Traffic when the surface is frozen does cause some loss of above ground foliage (insulation). However, the most damage to the bermuda is done when the traffic is severe enough to wear-out almost all of the above ground foliage or when the surface is thawing and the below ground root zone remains frozen. This causes severe damage (compaction) that kills some turf and exposes the remaining to winter-kill potential. A winter hardy bermuda must retain considerable foliage to insulate the stolons (lateral stems above the surface). If the stolons and dead leaves are heavily trafficked, they become very brittle and break off and are usually blown or washed away. You often see rows or piles of these dead fragments where water has washed over the surface. If most of the surface material is worn out due to traffic, then the best you can expect is for the bermuda to begin recovering from rhizomes (below ground, lateral stems) in about the following July. This is the survival means for bermuda, but it certainly doesn't provide good quality turf for early summer play.

--Bermuda is easily damaged by traffic when it enters the fall period at heights less than about 1.25 inches. Short turf wears out a lot quicker than taller bermuda. That is the main reason you almost never see loss of bermuda in roughs.

--The finer textured bermudas varieties are most susceptible to traffic injury. The more robust the lateral stems and dead leaves, the more likely to get spring recovery.

--The seeded bermuda varieties are somewhat less winter hardy than vegetative varieties, and the seeded varieties are extremely susceptible the first winter after establishment. Winter traffic stress would increase this problem.

--Overseeded bermuda or bermuda heavily infested with Poa or broadleaf weeds is also very susceptible to winter kill. Green/actively growing competitio n during the fall when the bermuda is going dormant or during the late spring when bermuda is trying to green up weakens the bermuda and makes it more susceptible to traffic damage.

--Traffic that occurs on the south or west side of tree lined fairways causes additional stress and possible increased winter kill. Bermuda that is growing near shade trees may survive a moderate winter, but be killed if traffic adds additional stress.

--Repetitive traffic that occurs in front of greens, at the end of cart paths, etc. will also increase winterkill. Compacted soil always retains more water during the winter and the bermuda roots are likely very, very short. Short roots and compacted soil always results in more winterkill.

--Even traffic that occurs during the fall, when the green bermuda is slowing down growth and accumulating reserve carbohydrates, may add enough stress to greatly reduce winter survival. Many of the above scenarios can be avoided by roping certain fairway areas, keeping carts in roughs, letting the bermuda get taller than 1.25 inches

by early September, disallowing cart use when the soils are very wet, etc. **Traffic is never good for the turf**, but a minimum amount of traffic on bermuda growing on dry soil is seldom a major problem.