

Perking up foot-weary turfgrass

Using wear-tolerant species and the correct cultural practices goes a long way, says Cornhusker expert.

by Ron Hall

■ Want to put spring and color back into your heavily-trafficked turfgrass? Dr. Robert C. Shearman gave some excellent suggestions at the GCSAA Conference this past February.

Shearman, executive director of the National Turfgrass Evaluations for the University of Nebraska, explained that heavy foot, spike or vehicular traffic crushes, shears and/or tears turfgrass plant tissue. This damage is immediate and apparent. To some extent, he explained, plants can heal themselves, depending on their recuperative potential and the conditions under which they grow.

Traffic, however, often creates a less obvious but more chronic condition—soil compaction. "The turfgrass is then in a lesser position to tolerate other kinds of stresses," he said.

Shearman pointed to research done by Dr. Robert Carrow of the University of



Dr. Shearman: Aerification plays a crucial role in turf recuperation.

Georgia, (and others), proving that turfgrass growing in compacted soils produces fewer roots and a shallower root mass. Compacted soils limit the amount of moisture and nutrients a turfgrass plant can draw on, explained Shearman. Both percolation and infiltration rates are decreased. Under these conditions aerification plays "a critical role" in maintaining acceptable turfgrass, he insisted.

Other factors to consider when managing trafficked turf include:

■ **Turfgrass species.** Some species, indeed some varieties within a species, tolerate wear better than others. Warm-season turfs like bermudagrass and zoysiagrass generally tolerate wear better than more-upright-growing cool-season turfs. But dormant bermuda and zoysiagrass both have slow recuperative potential. Improved perennial ryegrasses tolerate

wear and recover from injury rapidly. Check with local university researchers; consult with industry representatives for specific selections.

■ **Mowing height.** Mow at the higher end of the acceptable range.

■ **Irrigation.** Compacted soils will require lighter and more frequent irrigation, or at least until the structure of the soil is improved by aerification and the addition of soil amendments. An application of gypsum can be helpful on soils with high saline/sodium levels.

■ **Fertilization.** Heavily-trafficked turf may require as much as 30 to 40 percent more nitrogen, but managers must be careful not to overfeed the turfgrass. "If you're meeting the nutritional needs of the plant you're increasing the verdure, the density of the turf stand, the load-bearing capacity of that turfgrass," said Shearman. "If you exceed the amount that it needs, you have a tendency to get succulent, watery tissues that are susceptible to traffic injury and stress."

■ **Potassium.** Generally, increasing the rate of potassium that is applied to turfgrass during the growing season—matching even the amount of nitrogen used—increases turfgrass wear tolerance.

"It (turf traffic) is not something you can deal with with a business-as-usual attitude," said Shearman. "You really need to look at things a little differently. You have to adjust your management practices."

Supers can help 'manage' traffic



Coldiron: traffic=\$\$\$

■ Jerry Coldiron, CGCS, says that superintendents knowing the financial operation of their golf courses will have more input in management decisions affecting traffic on their courses

One example is the spacing of tee times: tighter tee times put more golfers on the course and generate more revenues.

"The amount of play directly influences the quality of our product (the course). So why shouldn't we deal with this?" asks Coldiron, superintendent at Boone Links (27 holes) and Lassing Point (18 holes) courses in Florence, Ky. Superintendents, in fact, should be in the best position to determine the optimum number of rounds for their courses, says Coldiron.

Equally important, superintendents should be aware of the number of rounds

needed to generate enough revenues to meet course expenses, reduce debt and finance capital improvements.

"We superintendents need to see and understand the big picture, to focus in on the dollar portion of our operations," he insists.

Today's superintendents must be able to support their positions with accurate and complete data, including financial data. This makes them valuable members of the management teams at their courses.

After all, emphasizes Coldiron: "The success and failure of all golf courses revolve around the course conditions."

And this is no less true at the public courses where golfers still expect excellent playing conditions but at very reasonable prices. —R.H.