

## COPING WITH HEAVY TRAFFIC ON THE GOLF COURSE

Randolph Russell  
Golf Course Superintendent  
Austin, TX

As we are all aware, traffic presents unique challenges in maintaining adequate turf. In most cases the effects of this traffic is very obvious. It shows up as bare areas adjacent to cart paths, worn areas on approaches between bunkers, and various other areas throughout the course where traffic is concentrated.

However, I would like to discuss briefly a more subtle effect of traffic, the effect that takes place throughout all turf areas. I believe that the effects of traffic is spread throughout the course and it must be considered in every maintenance decision.

In order to illustrate this I must refer to levels of play relevant to our operation but hopefully this can be correlated to your area. We have observed that maintenance programs are affected by a high volume of rounds. We were operating successfully with a fairly standard maintenance program when we were receiving 40,000 rounds per year. As we reached 50,000 rounds, the results of some programs deteriorated. To illustrate, a preemergent for goosegrass caused turf loss only in traffic patterns between green and cart paths. This one incident caused us to reconsider all of our programs.

We determined that since any herbicide application weakens the plant at least slightly that we must not accept the fact that it used to work, but must consider that if the plant is already under considerable stress from traffic any additional stress might be too much. We have compensated by more extensive testing and split applications at lower rates. We also decided that our prime goal was to keep the turfgrass as healthy as possible at all times. The major change was to adjust the N to K ratios of our fertilizer program. Previously we had been using approximately a 3 to 1 ratio. This was changed to a 1 to 1 or even 1 to 1.25 in some cases. We feel that this has greatly increased the hardiness of the plant. The evidence for that conclusion was dramatically presented about 3 years ago after the coldest winter on record. Many courses in our area experienced large turf loss on greens, as much as all 18 greens had to be replanted. We did not lose any turf!

When play reached 65,000 rounds, greens that had been perfectly acceptable began a slight decline in quality. While not particularly a problem, the trend was disturbing. Almost by accident we decided to dramatically increase the amount of N used on the greens. I say by accident because we were already on the high end of the "normal" range for our area. We just couldn't come up with another approach. We raised the N rate to up to four times normal or about 4 lbs per 1000 square feet per month during the spring. The results have been dramatic. The greens have progressed to where they are considered as good if not better than any bermudagrass greens in our area. The problems we anticipated, too many clippings, thatch build up, have not occurred. Our only explanation is that the traffic was literally wearing the grass off of the greens and we have given it the energy to recover in spite of the stress.

Other adjustments to the program included elimination of verticutting, and as many pesticides as possible.

I would like to encourage you to not underestimate the role of traffic on all areas of your course, to be willing to try new approaches and to be willing to go beyond the norms.