

# CHALKBOARD

## TIPS FROM THE PROS

### NEW LOOK AT FASTER GREENS

Golf course superintendents have been lowering cutting heights and topdressing with sand to increase the speed of their greens the past few years. The intention is to make their greens provide the same lightning pace of putts for golfers on televised tournaments.

Many superintendents have lowered cutting heights on greens to 1/8 inch or lower and verticut more frequently to satisfy their greens committees. Now, these low cutting heights are suspected of increasing stress levels on bentgrass.

Dr. Bill Knoop, Texas A&M Extension Center in Dallas, set up test plots recently to evaluate the impact of low mowing and nitrogen rates on bentgrass root depth. "We are taking samples every month and should have some type of conclusive data sometime next year," he states. "Already we suspect that problems with fast greens are caused more by a combination of low mowing and traffic, than by low mowing alone." Tests by Dr. Joe Duich at Pennsylvania State University two years ago identified the chief ways to increase putting speed. Lowering the height of cut was the largest single factor in reducing green speed. Verticutting has the second-greatest impact on speed, but the amount of impact depends upon the height of the bentgrass according to Duich. Verticutting bentgrass cut at 3/16-inch will increase putting speed more than verticutting 1/8-inch bentgrass. Topdressing with sand initially slows down putting speed, then increases it as the sand packs down. Frequent light sand topdressing is preferable to less-frequent, heavy applications. Finally, the speed of the bentgrass increases as the amount of nitrogen decreases. The lush the bent, the slower the ball rolls.

Equipment manufacturers are getting involved too. The engineers at Jacobsen have increased the speed of greens by attaching a "groomer" to the front of the company's Greens King IV riding greens mower. Like a small verticutter, the device lifts up horizontally-growing foliage, slices it and deposits it in the baskets on the mower. By removing the horizontal foliage and thatch, the unit lowers the resistance of the grass to the ball. Superintendents testing the unit have reported increases of more than 20 percent in ball roll without lowering the height of cut.

The attachment operates only when engaged by the operator. Results have shown grooming in two directions, one perpendicular



Jacobsen's Turf Groomer uses a grooved roller and small verticut reel to speed up bentgrass greens without lowering cutting height.

ular to the other, has the greatest impact on green speed. Jacobsen delivered the first units this fall.

Rotating brushes available on Bunton's walk-behind greens mower have been used to achieve a similar effect. First a grooved roller crimps any horizontal foliage or debris so it stands up for the brushes to remove. The brushes are attached to a shaft which spins in the opposite direction and in front of the reel. Peter Smith, superintendent of Shinnecock Hills Golf Club on Long Island,

NY, used Bunton's system to prepare his greens for the 1986 U.S. Open.

Duich found brushing greens reduces grain and speed. He prefers to put the emphasis on getting a "truer roll" than a faster one. He has bred a new bentgrass called Pennlinks that has an upright growth habit and reduces the amount of grain in greens. Very limited quantities of seed will be available from Tee-2-Green pending final review by Duich this fall. Compared to Pencross, Pennlinks is slightly slower.

### ZOYSIA SURVIVES 45 DAYS UNDER ICE

When Dr. Douglas Hawes, a consulting agronomist, heard about the widespread loss of zoysiagrass in the Kansas City area last winter, he wanted to know more. Phone calls to Kansas City superintendents revealed that some zoysia survived 45 or more days under a two-inch sheet of ice while acres of zoysia on the same courses died.

He found a number of things that contributed to the loss of zoysia. The courses with the greatest zoysia kill had similarities. These were large shaded turf areas, large areas with poor drainage and a northern exposure to the sun. Hawes reasoned the zoysia on these courses had smaller carbohydrate reserves from lack of sun, poorer root structure caused by damp soil conditions and a longer period under the ice due to lack of sunlight to melt the ice.

Hawes also fingered heavy cart traffic dur-

ing the months of January through May for increasing turf loss. Courses with the heaviest cart traffic had suffered the most. Zoysia located adjacent to cart paths was heavily damaged. He suspects thatch contributed as well. Finally, Hawes said courses using primarily benefin (Balan) for a number of consecutive years in the spring for pre-emergence broadleaf weed control had more problems than courses using other pre-emergence products.

After Hawes completed his study and reported back to the superintendents, only one is considering a switch to another turfgrass. The others chose to fight back by correcting poor drainage, excessive shade, heavy thatch and cart traffic.

For the complete report on zoysia survival contact Dr. Hawes, 2408 Roundrock Trail, Plano, TX 75075. (214) 867-0176.