

## GCSAA Set for Minneapolis

Back in 1936, superintendents belonged to what was called the National Association of Greenkeepers of America.

The annual show and conference was held in Cleveland that year — it had about 40 exhibitors and over 400 attendees including visitors. But some things have not changed much. In the magazine of the association one of the editors expressed concern that only 150 members of the association bothered to attend the conference at all.

Some other things also have not changed much. Some of the com-



1936 Cleveland Show

panies represented at that show of 40 years ago were Buckner Manufacturing Co., International Harvester Co., Jacobsen Manufacturing Co., Mallinckrodt Chemical Co., Milwaukee Sewerage Commission Standard Manufacturing Co. (now Standard Golf Co.), O. M. Scott & Sons Co., and Toro Co.

These and other companies have created an early sell-out of exhibit space for the Golf Course Superintendent's Association of America's 47th Annual International Turfgrass Conference and Show Feb. 8-13 in Minneapolis.

A total of 125 firms have made commitments on the 100,000-square-foot exhibit hall of the Minneapolis Convention Center.

Officially opening Feb. 10 by the GCSAA's executive committee, the three-day show will offer the expected 5,000 conference registrants close-up viewing of nearly \$8 million worth of maintenance equipment and services used on today's



1975 New Orleans Show

golf courses. Many firms will introduce additions to their product lines.

The show is held in conjunction with the GCSAA's week-long educational conference, which this year will offer more than 45 hours of educational programs, featuring 65 speakers.

Four preconference seminars will also be offered this year, beginning Feb. 7. The two-day courses, specifically designed for golf course superintendents, will cover landscape design, personnel management, pesticide usage and turf nutrition.

## "Bad Green Syndrome" Cause Cited

It seems every golf course has a bad green that has to have custom care. Causes of the loss of greens are complex and can seldom be ascribed to a single factor. However, the most frequent factor that predisposes a green to death is poor construction, according to University of Maryland turf specialist John R. Hall.

"The loss of a green can often be ascribed to disease, scaled or drying out, but these are only the harbingers of death that strike when the stage has been set and more often than not, the necessary conditions are created by improper golf green construction," Hall said.

Hall said the bad green always exhibits high bulk density, heat conductivity and mechanical resistance to root penetration. It is the green that retains more moisture than is necessary and has low air porosity, slow water infiltration and percolation rates. The solutions available to the golf course superintendent are: (1) reconstruct the green removing the existing topsoil; (2) attempt gradual soil modification in conjunction with management practices such as aerification and topdressing; (3) radically modify the ex-

isting soil by incorporating massive amounts of soil amendments; (4) keep nursing the bad green. "The last alternative puts the superintendent into the 'bad green syndrome,'" Hall said.

Hall said if the choice is to reconstruct the green that United States Golf Association Green Section specifications should be obtained and used. He also said Texas A & M provides a soil testing service to find out what combinations meet USGA specifications.

Gradual soil modification in conjunction with aeration and topdressing is most often the first approach to improving a bad green. This approach involves frequent aeration with large-diameter tines to as great a depth as possible. The cores must be removed from the green and then topdressing is applied and dragged into the holes. This procedure would have to be repeated several times over several years to achieve extensive soil modification.

Radical soil modification is an alternative that would involve trying to modify the existing soil structure and texture by incorporating the

amendment into the existing soil with plows and discs. This procedure obviously takes the green out of play for about four months. In situations where the existing bentgrass is good it should be removed as sod before soil modification and replaced after the amendments have been incorporated. This considerably reduces the time the green is out of play.

Several amendments are available. The type of amendment selected should depend on what corrective result is desired. If improved soil permeability is desired, sand and calcined clay have been shown to be very effective.

If increased water retention is desired, amendments such as soil, peat and calcined clay will be needed. The amounts of any of these amendments needed to achieve a given level of water permeability or water retention is difficult to determine but this service can be provided if the existing soil and amendments are sent to a laboratory, Hall said. Massive additions are generally required. If a superintendent is attempting to modify a clay soil, it is likely that 85 to 90 percent sand will be needed to achieve adequate modification.