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very costly for the maintenance dept.
They also were pretty much in agreement that the Bermudas have a high degree of disease resistance, even in extreme heat, but that Southern supts. probably haven't yet learned the real value of good fertilizer programs. Art Snyder probably best summed up the situation in the South by saying: "The acceptance of Bermuda was a great thing for golf in the southern states, but what really has made us better turf managers is the pressure the golfers have kept us under in demanding better conditions. The better supts. among us have overcome their resentment to this demand and are doing what they can to meet the challenge."

No noticeable new trends, either in maintenance or behavior of grasses, were reported by the cool season panel. E. F. Johnson opined that supts. probably are getting better results from applying fertilizers that are higher in nitrogen and potash and lower in phosphate than those used before. He also noted that the winter of 1958 brought a lot of snowmold, but fortunately the fine spring weather that followed, played a big part in helping to reduce the damage it caused.

Snowmold and dessication, for the most part, occupied the thoughts of John Steel, a Winnipeg supt. After trying all the preventatives recommended for minimizing their effects, he has concluded that they are best contained by late fall aeration so that the greatest possible amount of moisture is introduced and kept in the ground through the cold months.

Eb Goes to the Dye Bottle

Famed Pine Valley, according to Eb Steiniger, has been in the process in the last few years of converting from cool to warm season grasses because of its location and sandy soil. Bents never did very well here because of insects and diseases, zoysias gave only fair results and now the trend is to U3. Management now, Steiniger, one of the convention's most loudly applauded speakers, said, is on a Bermuda basis. Eb also let the audience in on one of his secrets that he doesn't want to get back to the membership: When Pine Valley gets that sunscorched, bedraggled look, he isn't above using a vegetable dye to restore the greenness that has helped make it as famous as its sand hills.

Don Likes, who has to contend with Cincinnati's extreme humidity conditions for at least six or seven spring through fall months, described his endless battle with wilt. The great need today, he feels, is for a chemical cooler that can be used
More than 278 Golf Courses selected
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Fourth Day
Everybody Ready to Talk About Golf Cars

The fourth day’s session was directed by Ted Rupel of Cherry Hills CC, Englewood, Colo., who served as chmn. Speakers included D. Grant Bennett, pro-supt. at Florence (S. C.) CC, Clarence Gottschalk, dir., Morton Arboretum, Lisle, Ill., Dave Gill, St. Charles, Ill. architect, Norman W. Kramer of Silver Lake GC, Orland Park, Ill., Robert I. Feser, Medina GC, Wayzata, Minn., and Garrett J. Renn, Juniata CC, Philadelphia.

A golf car panel with Joe Graffis, GOLFDOM publisher, as moderator, was composed of Gordon W. Brinkworth, Olympia Fields (Ill.) CC, James L. Haines, Denver CC, Paul J. Addessi, Tam-
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arisk CC, Palm Springs, Calif., and Ward Cornwall, Detroit GC.

**Spirited Discussion**

The golf car discussion, possibly the most interesting of the education sessions since it turned into a floor debate, was cut short by the bell and undoubtedly a few things remained unsaid. It was agreed that cars are here to stay and that the supt's objection to them, where it exists, doesn’t involve the cars so much as the people who operate them. Generally, supts. want to keep rules governing car use to a minimum because the more edicts that are issued regulating their operation, the more golfers will ignore them.

What supts. want more than anything, boils down to this: Genuine authority to penalize persons who violate restricted areas around tees and greens.

It was apparent from opinions expressed by both panel members, and those who took part in the floor discussion, that rental users of cars cause more damage than private owners, and that more course wear and tear actually result when operators are required to use designated paths, such as through roughs, rather than have the run of the fairway.

Grant Bennett, in his remarks, stressed that the supt. shouldn’t be hesitant in going after all the economic benefits that he feels are due him, but this should come only after honest soul searching to determine whether he is worthy of them. In short, the man who is seeking benefits shouldn’t go to his club board with comparisons of his salary and that of the supt. at a nearby club, but should be armed with the things he has done for his club in comparison with those done at the neighboring course. If they are at least equal, then he has good reason to plead his case. Bennett also urged stronger personal public relations by each man in the GCSA and more active support of local and regional turf groups.

**Landscaping by Design**

Clarence Gottschalk, speaking on landscaping, said that tree planting designs should be as carefully thought out and blueprinted as those of the course itself. Using slides to illustrate his speech, Gottschalk showed the supts. several examples of both good and poor layout. Among things he stressed in making landscaping an art and not a mere tree or shrub planting venture were: Balance, a predominate theme, harmony with the way in which a course is graded, use of complementary colors and rather extensive use of bays and points in making plantings.

Several points made by Gottschalk were reiterated by Dave Gill, who spoke on the “Basic Principles of Course Architecture.” Gill pointed out that the architect who is able to blend his blueprint with what nature provides is the most successful course designer. He listed at least 20 things the course designer has to keep in mind about the building of tees, traps, greens and fairways. He summarized these points by saying that all should be devised with the idea of making the course difficult but not impossible and with the view of always rewarding the well played shot.

Gill maintained that every course site has individual characteristics that don’t lend themselves to the copying of some other course. He also questioned whether an architect, who is not completely familiar with a particular region, can come in and do better than an average job of layout mainly because of the soil topography and climatic factors with which he is not familiar.

**Hints on Efficiency**

Norm Kramer and Bob Feser combined to give the audience some tips on improving maintenance efficiency. Kramer stated...
that, wherever possible, every employee should use the same piece of equipment day in and day out, that it is costly not to transport employees and machines from job to job by car or truck, and that the time the supt. takes to individually instruct employees in the use of machinery and materials is very well spent. When play is heavy, Par 3 holes are cut first at Kramer's Silver Lake course which is laid out for easy access of equipment from one fairway to the next. This year, Kramer is going to make extensive use of spreaders on fairways and also convert from 7-to 9-gang mowers, both in the interest of increasing efficiency.

Oversees Two Courses

Feser, who oversees two 9-hole courses about six miles apart in Wayzata, Minn., said that many supts. don't operate efficiently because they never get around to establishing a daily routine. Most jobs at a course, he pointed out, can be handled in something resembling line order. Where possible, cost figures for every operation should be determined. This is especially true at semi-private and public courses where it is mandatory that owners know what each and every type of job costs.

Feser added that no attempt is made to keep the Wayzata courses in anything like lush condition because the cost of doing so is prohibitive.

How Philly Speeds 'Em Up

What is done at public courses in the Philadelphia area to speed up play was explained by Garrett Renn. Bells on greens, periscopes on tees at blind holes and dual cups on many holes are among the devices used in keeping players moving, he said. Traffic flow is built in from a maintenance as well as a physical standpoint. Courses are built without sand in traps although trap contours may be visible, bunkers are located only where they can keep balls from going out of bounds, and fairways are aligned diagonally to the right to cut down on slicing into the rough. Renn said that course maps are given to every player, rangers constantly travel around the courses to spur the stragglers and caddie retrievers are stationed at every water hole. The Philadelphia supt. conceded that while some of these measures take some enjoyment out of the game, golfers apparently are willing to put up with them because they come back in greater numbers week after week.
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Fifth Day
Buildings, Problems, Success Are Discussed

The final day's meeting was directed by Lawrence G. Mattei, supt. at Kingsboro GC, Gloversville, N.Y., who had as his speakers, Rex McMorris of the National Golf Foundation and O. J. Noer, Milwaukee Sewerage Commission. Panels who discussed the secrets of a successful supt. included Chester Mendenhall, Mission Hills CC, Kansas City (moderator), Paul F. Leix, Allegheny CC, Sewickley, Pa., Charles E. Shiley, North Hills, Milwaukee, James W. Brandt, Danville (Ill.) CC and Jack Kidwell, Beacon Light GC, Columbus, O.

McMorris, discussing maintenance service bldgs., said that most clubs pay little regard to these and expect supts. to work in antediluvian barns and sheds. However, the clubs that do provide good working quarters usually put more money into them than about 80 per cent of the clubs want to spend. Thus, the Golf Foundation director said, it is just a little difficult to supply construction information on a medium price maintenance building that will meet most of the supts' requirements. The more modern service buildings, according to McMorris' statistics, range from 4,400 to 7,200 sq. ft. in area and contain a small office, lockerroom, hand tool room, mower room, space for keeping large equipment, a repair and paint shop, separate stalls or sections for fertilizer, seed and chemicals, and a mixing room.

Many Have to Learn Answers

O. J. Noer's topic was, "What's Your Problem." Looking at the turf situation on a kind of grand scale, the Sewerage Commission agronomist said that researchers, supts. and others in the field have probably licked most of the major problems, but that doesn't necessarily mean that everybody has become familiar with all the answers. Continued education is the only cure for that, he added.
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Getting down to details, Noer cited (1) the sudden collapse of grass, and (2) discovery of even better ways to improve courses as the immediate major problems supts. now have to cope with. As to the former, he stated that there is still a great deal that a majority of supts. have to learn about diagnosing turf ailments. Much of this stems from the fact that even old hands at the game are deceived by secondary rather than primary causes of trouble.

Speaking of improved courses, Noer said that before supts. realize the ultimate they are going to have to learn even more than they already know about performances of grasses, soil factors, grass and soil environment, protection from injury and disease and numerous other things that go beyond pure mechanical management. In concluding his speech, Noer related a half dozen course case histories in which proper diagnosis led to quick improvement of poor turf conditions.

Secrets of Success

The final day's panel was made up of four men who have a total of 84 year's experience in course management. All of them agreed that only continuing education gives a supt. the confidence to cope with the ills which beset him. But as, Jim Brandt pointed out, education can become a handicap if a supt. retreats within himself to the extent that he thinks he alone knows all the answers.

Other prerequisites for success brought out by the panelists: Listen to the golfer even if he doesn't know anything about turf — you may learn something; Advance planning of operations is about 75 per cent of the job; Record keeping is necessary for intelligent operation; Avoid cheap construction and use of salvage material; Cover your course once a day.

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