If the Midwest GCSA, sponsors of the 30th National Turfgrass conference and show, had misgivings as to what rather miserable weather was going to do to their Chicago extravaganza, held from Jan. 25 through the 30th, they were quickly dispelled. By the evening of the 26th, registration day, the old attendance record of 1,457, established in Washington last year, had been broken and even after that, supts., agronomists and turf specialists continued to pour in. The final tally mounted to 1,720.

This year’s conference possibly dwelled more on the practical phases of turf management than in other years with maintenance efficiency and innovations in methods of operations being the themes discussed most frequently. Practically every one of the education sessions attracted huge and attentive crowds which came right on through the final day when attendance normally drops off quite noticeably.

Here is a summary of the 5 days’ proceedings:

**First Day**

**Celebrities Take A Bow and Education Sessions Are Launched**

After Henson E. Maples, first education session chmn., called Pres. Bob Williams to the podium to throw out the first pitch, Ray H. Gerber, pres. of the host Midwest GCSA, welcomed the convention delegates. In his remarks he cited nine Midwest members who had been working for the past two or three months to prepare the stage for this year’s conclave. They included the following: Roy Nelson, Ray Didier, Wes Updegraff, Ray Davis, Amos Lapp, Peter Bild, Ed Stewart, Al Johnson and Gordon Brinkworth.

O. J. Noer and Stan Graves, who long
Conventioneers saw plenty of snow in Chicago. Below and on page 26 . . . among those who were there.

John, Ruth, Alex and Chris Edgar and Joe Austin.

Al Hines, W. McClumpa, Mrs. Hines, Mr. & Mrs. Ed Stewart, Mr. & Mrs. Marv. Guening, John Polakavik.

Mrs. Eleanor Neussle, Walter Pieper, William Neussle, Mrs. Pieper, Mrs. Edwin Wollenberg


have been noted for introducing celebrities at GCSA conventions with sprightly commentary interspersed with appropriate laudatory remarks, again were in excellent form when men who have made their marks in the sports industry, were asked to take a bow. The imposing list was made up of John D. Ames, USGA pres.; George Allen, who was substituting for George Halas of Chicago Bear fame; Charles (Chick) Evans, the ageless amateur star; Ted Payseur of Northwestern University who has spent 40 years promoting intercollegiate golf; Carl Stockholm, a onetime Olympic bicyclist who is helping to bring the Pan Am (equivalent to the Western Hemisphere Olympic) games to Chicago this summer; and Charles (Chuck) Eckstein, Chicago Dist. GA pres. and green chmn. at Raviloe CC for 18 years, who is the most relentless of legmen in peddling golf to people in the hinterlands.

Ames, after describing conditions at the Royal & Ancient at St. Andrews, which he visited last summer with the U. S. World Amateur team, called attention to the work that is done by the USGA green section, noting that this activity is carried on at a deficit of $54,000 annually. George Allen, who had the Halas proxy, traced the growth of pro football from a spectator support standpoint and told how the football magnates constantly are looking for new ideas to make the game even more appealing to the fans.

Asks for Faster Fairways

Chick Evans, a capable if reluctant speaker, complimented the greenmasters on the enormous progress they have made in improving their acres since he broke into golf. In behalf of golfers who have been at the game for nearly a half century, as Chick has, he suggested that the next great improvement would come when the supt.s develop faster fairway grass and slow down the turf on the green. Ted Payseur, who played in the Intercollegiate in 1919, and as Northwestern's athletic director for many years, was close to the college golf scene, pointed out that the Intercollegiate title has escaped many a great player who later went on to shine on the pro circuit.

Tells of Pan Am Games

Supt.s, got an idea of how much work and money are involved in staging an international event such as the Pan Am games when Carl Stockholm took the rostrum. He told how an English construction firm is being imported to build the cinder track over which various races
Hospitality hour was going full blast when this photo was taken.

Garrett J. Renn, Charles H. Wilfong, Arthur Anderson and Roger S. Wallace.

Paul Miller, J. S. Garskie and Betty Hulshouser. Fred Kuehn photos

will be run, and of the many facilities in Chicago that will be used to stage all the events that are to be included in the international competitions.

Chuck Eckstein, last of the celebrities to be introduced, gave some interesting facts about golf in Chicago. There are 169 clubs in the area but this number still is 50 short of the courses in existence in 1933. Discussing land values and construction costs, Eckstein said that any group that is seriously considering building, or buying into existing courses, had better investigate all facets of investment and potential return because profitable operation certainly isn’t assured by merely going through what seem to be business-like motions.

Speakers who followed the celebrities on the first day’s program were Ben Sheets, mgr. of Lake Shore CC, Glencoe, Ill.; Tom Walsh, pro-owner of Westgate Valley CC, Chicago; Malcolm G. Peterson, dir. of sales training for E. I. duPont de Nemours & Co.; and William H. Bengeyfield, western dir. for the USGA green section.

New Officers A Problem

Ben Sheets suggested that supts. are not alone in their sometime difficulties in dealing with club officials. The club manager, he stated, oftentimes is faced with the task of pleading for funds to repair or replace below-deck facilities such as heating plants although there may be liberal allocations, quickly granted, for buying new furniture, drapes or bar room supplies. New officers, in his opinion, are the biggest stumbling blocks for the manager. They often resist change or improvement in operation of the club and not wanting ever to be identified with that “free-spending regime,” hold a tight grip on funds. When they are finally convinced that money has to be spent to keep the clubhouse in repair, or for equipment, their term in office usually is about to be concluded.

“Love that golf course,” was pretty much the theme of Tom Walsh’s remarks. One of five brothers who have long been identified with the game, Tom professed a certain nostalgia for the old clays, but was quick to point out that contemporary supts. are eons ahead of the “greenkeepers” of only 25 years ago in the way in which they keep their estates. Walsh emphasized that both the pro and the club owner appreciate, far more than anyone else, the artistry and hard work that are reflected in today’s typically beautiful courses.

Enthusiasm was the keynote of a speech by Mal Peterson, who deals almost exclusively in that commodity in training duPont’s fledgling salesmen. Peterson, who probably can be described as a Norman Vincent Peale in an industrial setting, pointed out that enthusiasm may not be as easy to come by as people like to think. In reality, it can only be derived from deep understanding and knowledge of the article a salesman is selling, or in the case of a course supt., the program he is trying
to put across or the goal he is striving for.
A supt., Peterson declared, never should
attempt to sell a course budget until he
is thoroughly familiar with every item in
and behind it so that it can be explained
not as a cold compilation of figures pre-
fixed by a dollar sign, but in terms of the
satisfaction that it is going to bring the
membership.

Psychology Important
The first day's session was concluded
with a speech by Bill Bengeyfield on labor
relations. Considering that about 70 cents
of every maintenance dollar is spent for
labor, Bengeyfield said, it is logical to
suggest that the supt. might better be
more of a psychologist than turf specialist.
Good labor relations, he explained, con-
sist of being respected if not loved. Bill
also said that if a man earns a reputation
for having the common touch it doesn't
necessarily mean that he becomes over-
familiar with his employees. He concluded
his talk by listing seven points for han-
dling men. They ranged from setting good
examples for employees to avoiding the
serious sin wherein the boss takes himself
too seriously.

Bob Mitchell of Sunset CC, Sappington,
Mo., steered the meeting through the sec-
ond day in which the theme was research
in action.

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Speakers included Marvin Ferguson,
who has the two-fold job of directing the
USGA's mid-continent green section and
coordinating its research; William Martin
of the University of Minnesota; Malcolm
Shurtleff, Iowa State College; and Gene
C. Nutter, University of Florida. These
men dwelled on research.

How research is applied was described
by the following supts.: Carl Wagner,
Lambton GC, Toronto; Bob Shields,
Woodmont CC, Rockville, Md., and Cam-
eron Henderson, CC of Buffalo, N. Y.

H. Burton Musser, long associated with
the agronomy dept. of Penn State Univer-
sity, spoke on professional training.

More Logic Than Luck
Marv Ferguson debunked the oft-re-
peated fallacy that chance plays a bigger
part in research than logic. He said that
men in this work develop and test ideas
to the point that it becomes evident that
they are either going to produce an im-
proved product or method or be abandon-
ed as worthless. Luck plays a part in no
more than one in several thousand cases, he
added.

Turf research, Ferguson declared, hasn’t
received anything like the support due it
because there is no way of placing a dollar
and cents value on the good that it does.
In the golf field, one of the few examples
of what turf research has accomplished is
found in the development of Tifgreen.
This strain, Ferguson said, was nurtured
at an extremely low cost in comparison
with its current value in greens on South-
ern courses. It is used at 100 different
locations or, in all, on about 1,500 greens
conservatively estimated to be worth $3,
000,000.

In describing fertilizer tests carried on
at the University of Minnesota, William
Martin said that there is some question as
to how effectively turf absorbs nitrogen.
Leaching, loss to the atmosphere and the
action of microorganisms may reduce the
absorption rate to around 50 per cent,
according to current estimates. Martin,
however, said microorganisms shouldn’t
be regarded as total parasites since it is
probable that even though they rob plants
of food, they store quite a large part of it
which eventually is released to the plants.
How much of a friend or foe soil bacteria
is, though, is something that researchers
will continue to look into.

Martin produced charts that show that
loss with ammonia fertilizers may be
around 45 per cent, the same as with dried
blood, while nitrate losses may range to
52 per cent. Tests have shown that the
nitrogen per cent content is not increased by adding fertilizer.

Good Management Preferred
Malcolm Shurtleff, who briefed the supt.s, on recent progress made in development of fungicides, said that there are 15 known major diseases which it is possible to screen grasses against. He emphasized, however, that it is folly to place more than secondary dependence on fungicides, advocating sound management practices as the most reliable method of keeping turf disease free. The Iowa agronomist hinted that fungicides aren't quite the panacea that some turfmen like to think they are.

"Even the best fungicides," he said, "aren't anything like 100 per cent effective where management has been sloppy. It also should be remembered that favorable results aren't always obtained simply because so many persons in turf work don't know how to apply the right concentration of a fungicide at the right time or, for that matter, don't always select the right type of fungicide."

The nematode, which has become one of the new scourges of supt.s., and by that token, the darling of researchers, was exposed by Gene C. Nutter. He explained that there are several species of the pest, many of which alternately wax and wane in different seasons and thereby constantly assault plant roots. Nematodes exist in two or three layers immediately below the surface and dehydrate turf. When it loses its vigor or chlorosis becomes evident, Nutter said, there is strong indication that the nematodes have invaded the soil.

Menace Is Widespread
To combat them, the University of Florida agronomist, recommended first of all, a soil test, and then deep aeration followed by treatment with a nemicide. But none of these steps will produce desired results, he added, if the nemicide is not sealed in the ground with heavy applications of water. The large scale nematode menace was first detected about five or six years ago on Long Island. Since then it has spread practically across the U. S. and is not showing signs of diminishing.

How to cope with nematodes, fungi and miscellaneous pests and diseases that technical men conjure, and continue to grow grass, was the subject of speeches by Bob Shields, Carl Wagner and Cameron Henderson, who outlined some of the old and reliable as well as advanced management practices that are employed at their clubs. Shields gave a very thoroughgoing de-

cription of how maintenance is carried on at his Rockville, Md. estate. Probably of greatest interest to the audience was the fact that he has to employ two sets of maintenance standards — one for warm, and the other for cool season grasses — since he is in the transition zone. This calls for two types of grass on the tees and the maintaining of large fairway and green nurseries so that the change from warm to cool season grass, or vice versa, can be made at different seasons without serious interruption of play.

Carl Wagner, whose Lambton club is located deep in the snowmold belt, gave a brief discussion of what has to be done in Canada to combat the excesses of the seasons. He came to the conclusion that while technical knowledge of turf is important for a supt., the real criteria of success is how well or how little he trains, and is capable of directing the men who work for him.

Cameron Henderson, who broke into the turf field with his father, contrasted the old days, when it took a man six hours to aerate a green with hand tools, to the 30 minutes that it now requires with a machine. He cited numerous other instances of how the time element has been reduced through wide use of machinery. But he questioned whether the golf industry has kept pace with these mechanical improvements in its attitude toward the people who are employed in it. The CC of Buffalo greenmaster declared that the supt.,

(continued on page 52)
Record Crowd at Convention
(Continued from page 30)
whether he recognizes it or not, is responsible for the best possible working conditions for his crew and that he should not try to duck this obligation by saying that it is strictly a matter for the club to see that they are provided.

"Professional Education" was the theme of the talk given by Prof. H. B. Musser of Penn State University, the final speaker on the second day’s program. He commended the supt.s on the high estate of their profession, but said the great educational strides they have taken in the post-war years are only a beginning. "Ability to meet the new challenges that are constantly arising calls for even more education," Musser said.

Turf management today, Musser continued, is becoming so much of a science that minimum requirements for those who are entering it are, or should be, much higher than they were just a decade ago. He called for a thorough re-examination of training and guidance programs by a committee within the GCSA so that not only new men entering the field, but those already in it, who may not feel they are adequately equipped to handle their responsibilities, can be helped.

The Penn State agronomist also said that because of the demand for new and replacement supt.s., the country’s golf clubs should start taking more interest in the work of the GCSA, especially in the matter of helping to train and even educate assistant supt.s. and maintenance employees who show a talent for turf management.

Third Day
George Looks Into Future; Turf History Reviewed
The third and busiest day of the educational portion of the convention was launched with the showing of a sound movie, "Progressive Supts. and Their Practices," filmed by O. J. Noer and Charles G. Wilson of the Milwaukee Sewerage Commission, and with stirring background music by Haydn, Rachmaninoff and others. Topdressing and root pruning were made exciting in this well contrived film which featured actors well known to the audience — supt.s. from several Chicago dist. clubs, Winged Foot, Denver CC, East Lake, Vesper and several others. Meeting Chmn., J. L. Jennings, then called on George Lanphear, supt. Knollwood County CC, Granada Hills, Calif., and B. P. Robinson, Birmingham, Ala., agronomist, to summarize progress made in management and research over the years.

Lanphear noted that it is encouraging that supt.s. have completely gotten away from "hoarding their tricks" as they did in prewar years. He pointed out that even though much has been learned about turf maintenance in the last decade, that doesn't mean supt.s. know all the answers. He wants to see more secrets uncovered in the construction and maintenance of greens and fairways in arid areas and in maintenance of greens under adverse weather conditions.

George Has Some Ideas
In preparing his remarks, it was evident that George allowed himself the luxury of dreaming. He visualizes the day when every man sent out by the manufacturers is an agronomist or engineer as well as a salesman. He foresees the widespread use of growth inhibitor and a chemical that will quickly convert the most reluctant soil to supporting fine turf. Lanphear's best played shot was saved for his concluding remarks: He thinks it is time that the supt.s. start equipping their shops with small labs, not so much with the idea of driving research men into other fields but to learn even more about a subject they already know quite well.

B. P. Robinson, in outlining turf's chronological progress in the last 50 or 60 years, said that even though the giant steps have been taken in the last decade, there were important stirrings in grass hybridization and selection as far back as 1915. Bermuda, for example, was being separated and nurtured in those days but its widespread use was delayed for nearly 40 years because enough people weren't interested in it.

The '20s, Robinson said, was a period of rather striking progress. Topdressing was getting a rather wide play and most turfmen recognized the advantage of good drainage. The trouble was they didn't have much understanding of compaction and fertilizer rations were on a semi-starvation basis. Several kinds of disease were recognized in this era but the fungicides that would have controlled them were 20 or 25 years away.

Warm, Cool Season Panels
Chairman of the afternoon program on the third day was Bill Milne of Knollwood CC, Birmingham, Mich. His roster of speakers included Charlie Danner, Rich-
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Record Crowd at Convention

(Continued from page 52)

land CC, Nashville and Gene C. Reid, City Parks Dist., Tucson, Ariz. He also introduced two panels that covered maintenance of warm as well as cold season grasses. Moderator of the former panel was Gene C. Nutter and included L. W. (Sonny) DuBose, Houston CC, Art Snyder of Paradise Valley in Phoenix and Norman C. Johnson of the CC of Florida, Delray Beach. William H. Daniel of Purdue led the discussion for the cool season contingent that included E. F. Johnson, Park Ridge (Ill.) CC, Eberhard Steiniger of Pine Valley, John B. Steel, St. Charles CC, Winnipeg, Can., and Don Likes, Hyde Park G & CC, Cincinnati.

Charlie Danner, the man who gambled with bent and won in Nashville, the first in the South to do so, inferred that other grasses have begrudged him the victory. There's a fairly constant battle against invasion by poa and Bermuda and, of course, the weed and disease menaces are ever present. Bermuda, Danner said, is kept in control by edging and by tip cutting and sweeping. Heavy fertilization is necessary to curb the other sources of trouble. Wilt, too, is a constant threat that is kept in check, according to the Southern bent pioneer through daily surveillance.

Gene Reid, who oversees municipal courses in Tucson where as many as 75,000 rounds a year, including 8 or 9,000 in each of the winter months, are played on any one of his layouts, pointed out that it is necessary to water every evening and constantly make light applications of fertilizer to keep greens in playable shape. His fertilizer source is local sludge that is reduced to a dust. Aeration goes on thru the summer to get greens into top shape for winter play. Overseeding is started on Dec. 1, and considering the heavy play from this time until Apr. 1, results from it generally are good.

The conclusion reached by the warm season panel was that the South is going to have to pay more for better strains of grasses. Maintenance costs in Florida, Texas and Arizona have increased quite sharply in the past few years and this trend is spreading through the South. Players are becoming more demanding and where a few years ago, they took a vacation from golf in the summer, they now want to play around the calendar. Summer operation, the panelists, agreed is
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They also were pretty much in agreement that the Bermudas have a high degree of disease resistance, even in extreme heat, but that Southern supt.s 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 supt.s, 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 supt.s 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 preventative measures recommended for minimizing their effects, he has concluded that they are best contained by late fall aerification 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
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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 J. Feser, Medina GC, Wayzata, Minn., and Garrett J. Renn, Juniata GC, Philadelphia.

A golf car panel with Joe Graffis, GOLFDOM publisher, as moderator, was composed of Gordon W. Brinkworth, Olympia Fields (Ill.) GC, James L. Haines, Denver CC, Paul J. Addessi, Tam-
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 supts.' 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, supt.s, 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.
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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