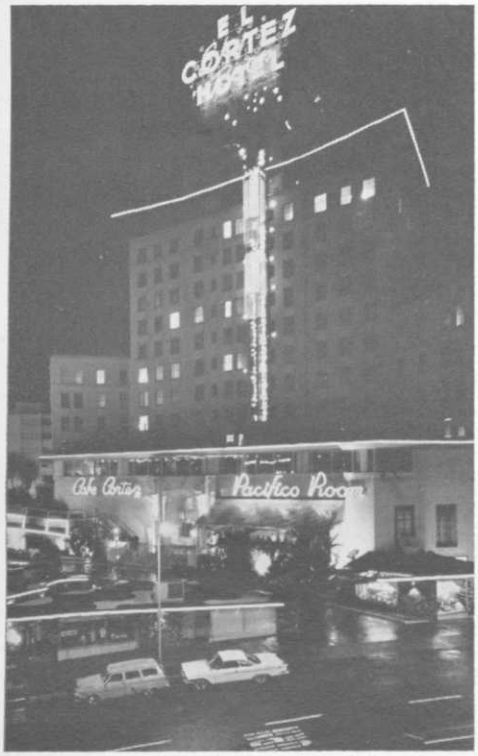
Harvey Hardin, Tom Mascaro, Donna Caine, L. R. (Bob) Shields and Sherwood Moore of the exhibit committee snipped the ribbon that let the thundering horde move in on the manufacturers' displays.

(Left) John Gaughenbaugh of the Hi-Lo Desert host group gets his official decoration from Donna Caine, convention hostess. It is interesting to note that Donna, a part time model, has a fulltime job as an animal trainer at the San Diego zoo.



Spectacular exterior elevator, that delivered conventioneers to oasis on the fourteenth floor, served as a landmark for those who may have wandered from the El Cortez and had trouble finding their way back.

George Lanphear, G. A. (Bud) Turner and Bud Blakely also were members of the Hi-Lo Desert committee. Lanphear ran GCSA golf tournament; Turner headed women's activities committee; and Blakely was the official greeter.

Three veteran turfmen, all unidentified, seem to be pleased to be away from the daily routine. It's probably because they didn't have to get up early.

Gene Stoddard, Costa Mesa, Calif., Bob Hinkle, Louisville, Ky. and Jim Burton, Greenville, O., look ahead to 1964. They're getting information from Wanda Dodds about next year's conference in Philadelphia.

Convention photos — Nick Pottengill and Ben Chlevin.

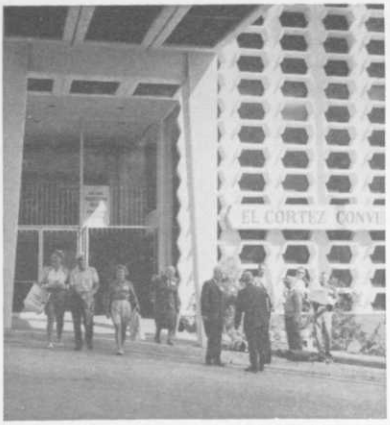
Perhaps impish grin of Sherwood Moore (l), who relinquished GCSA presidency to Roy Nelson, implies that latter doesn't fully realize what he's getting into.

GCSA Convention

Masters of the big show, the golf course supts. were at their best in San Diego

(Story starts on next page)

This was a common scene. Supposedly supts. talk shop when they get together like this, but there's a suspicion that an occasional story, you wouldn't repeat within hearing of the kids, is slipped in.



Entrance to convention hall

Velikovsky-Velotes

The comrade had the audience fully aroused.

• The course supt., 1973 model, will be a programmer who will do little more than feed mountains of data into an electronic computer ten years hence in order to determine what the fertilizer ration will be, when to mow and at what height, the most favorable time for laying on fungicides and herbicides, and to find answers to scores of sundry problems that today stump even the most knowledgeable turfman . . .

• Some of these promising young greenmasters, already recognized for their skill in the turf field, apparently have been taking sneak postgraduate work at the Toastmasters Club and through the Dale Carnegie schools to improve their abilities as speakers . . .

• The GCSA's education committee certainly invited criticism by allowing the State Department's cultural exchange program to foist that representative of the Soviet Union's sports delegation on an unsuspecting audience of patriotic American supts. . . .

Of all the conclusions reached by persons who attended the education sessions of the GCSA's 34th international turf show in San Diego, Feb. 11-14, the above three probably were most prevalent. That is not to say that this year's conference was necessarily the most provocative ever staged because many similar and stirring observations have arisen as the result of past conventions. But Nos. 1 and 3 above had the delegates still talking the following day in the El Cortez Hotel lobby, and as for the facile speeches of at least four or five of the GCSA's own bright young men, they excited more than just an ordinary amount of favorable comment. It was as though the supts' speakers bureau suddenly had come of age.

Attendance Falls Off

The San Diego gathering was not nearly as well attended as those of recent years, with only a few more than 1,350 registering. This was nearly 800 under the record crowd that poured into Miami in 1962. Geography probably was more to blame than anything else for this discrepancy. Approximately three out of four supts. live east of the Rockies and for many of these GCSA members, the long trek to Southern California undoubtedly was out of the question. For those who did make it, though, there probably never was any warmer or more convivial welcome than that extended by Elbert (Doc) Sanders, general arrangements chairman, and his Hi-Lo Desert organization which served as the host group for the conference.

Rain Imported

In repayment for all the courtesies extended them, the visitors brought a light two-day rain to the San Diego area. Under ordinary circumstances this would be welcomed with about the same enthusiasm accorded some kind of plague. But for once the natives were excited over the smattering of poor weather that the visitors slipped through customs with them. It was the first rain they had seen in more than 300 days.

To return to those conclusions reached by the audience, John Madison, U. of California turf specialist, prompted the first one. Describing how a Salinas, Calif. chrysanthemum grower uses a data proc-

essing machine to handle the complete cycle of planting, feeding, cutting and selling his flowers, Madison suggested that the day isn't far off when supts. will be so busy punching cards and perforating tapes in setting up their maintenance programs that they won't need to stray beyond the No. 1 tee to determine how their courses are faring. Immediately, the convention visitors started asking if Madison's remarks may not be prophetic.

Poised and Polished

Speculation as to whether a handful of the younger supts., who spoke at the educational gatherings, hadn't been doing some oratorical homework was occasioned by the poised and polished performances of such as Joe B. Williams, Ted Woehrle, Carlton E. Gipson, Paul Voykin and John L. Kolb. Some of the old podium hands, too, acquitted themselves in a professional manner, notably Arthur A. Snyder, the Scottsdale, Ariz. squire and Joe Butler, who brought his rich, resonant voice from Beverly, Mass.

As for the Moscow traveler, his early remarks provoked a drizzle of grumbling that blew into quite a storm before he had spoken even five minutes. His vilification of American institutions, particularly our newspapers, and pronouncement that capitalism is a dead horse, caused many in the audience to stomp out of the hall in great anger. His final, and possibly most unkind, cut came when he denounced golf as a game that is designed for aristocrats and has led to the virtual enslavement of youngsters who work as caddies.

Finally, Dr. Andre V. Velikovsky, as he was introduced, unmasked himself. He turned out to be George Velotes, a fine, young, red-blooded American with Stanford and Harvard degrees in political science. For the last two or three years he has been making the rounds of conventions and other gatherings giving shock treatments to Americans who are complacent about the Red menace, and don't fully appreciate the advantages of living in a society that offers freedom and great opportunity. Velotes used films to show how the heavy handed Russian propaganda is dispensed, adding that the Soviets annually spend twenty times as much as we do in attempting to persuade the world that their system is superior to ours.

Following is a session by session account of the education meetings:

First Session

Outer Space or Not You Can't Escape Taxes

"The World About Us" was the theme of the first session, all six of which were held in the El Cortez's convention annex. The opening gathering was attended by women, something new in the conference procedure, but thereafter the ladies were sent on an expedition to the Zoo, took a harbor excursion trip and otherwise spent their time taking in the San Diego sights. Leonard J. Strong, retired Saucon CC supt. and perennial keynoter, delivered the convention pitch speech. He was followed by Ray T. Blair, Jr., community relations representative of General Dynamics/Astronautics, Dr. Ernest L. Wilkinson, president of Brigham Young University, and that Jekyll-Hyde personality, Andre V. Velikovsky — George Velotes, about whom you already have read.

John Madison

Tom Leonard

Vic Youngner

Joe Williams

Jack Kolb

. . . . the speakers were up for this one.

Sherwood Is Honored

Gene C. Nutter, the GCSA's executive director and another who obviously has logged time in the Toastmaster and Carnegie workshops, was the chairman of the

GCSA exhibitors agree that prospects are encouraging.

first session. He introduced Father Robert J. Erickson, who gave the invocation, and Mayor Charles C. Dail, who jangled the keys to the city and told of the wonders of San Diego, which is soon due to receive an All -American City award from a national magazine.

The mayor magnanimously knighted Sherwood Moore, the outgoing GCSA president, by declaring him an honorary citizen and bestowing upon him immunity from taxes in perpetuity. Sherwood's reply was to the effect that he would sing endlessly the praises of the pearl of lower California, and even officially serve as a stringer for the local Chamber of Commerce if the fee was right.

They Aren't Understood

Ray T. Blair, in his address entitled "Birdies in Space", emphasized the fact that technology has advanced so rapidly in the last decade that scientists will spend the next ten years trying to catch up with many of the theories and explanations that are behind hundreds of the discoveries they have made but aren't yet fully understood. For example: The liquid hydrogen used as a booster in the Centaur missile may be on fire but it's impossible to tell it by looking at it.

Even though man has made unbelievable advances in recent years, the General Dynamics official said, he is still greatly handicapped because there is little or no precedent for the things he is trying to accomplish in solving the space enigma. His most immediate problem is to anticipate what may befall him as he increases the arc of his orbiting, and to determine whether he can hope to survive as he travels farther and farther from earth.

One anecdote related by Blair that drew a titter from the audience: While Walter Schirra was inspecting the missile that was to send him rocketing up from Cape Canaveral, he studied the many intricate instruments and commented: "I hope they didn't farm out these gadgets to the lowest bidder."

Worse Than We Realize

Discussing the future of free enterprise in U.S., Dr. Ernest L. Wilkinson said that it is being strangled and not too slowly, at that. Income taxes, special privileges, special bounties, the belief that debt is the status quo of our times, he declared, are steadily sapping whatever strength and initiative we have left.

Tracing the history of the income tax, Wilkinson opined that the legislation that enacted it will be remembered as the most significant of this century. Originally, it was intended to limit the tax to two per cent in peacetime and five per cent in wartime. "The specter of rates that might someday range from 20 to 91 per cent," the Brigham Young president stated, "would have scared pre-World War I congressmen and senators out of even thinking of taxes on individual incomes. The confiscation that we know today was not what they had in mind."

Wilkinson outlined the following five-point plan that he declared is our only hope of salvation: Reduction of federal government dominance of the individual and business; Complete repayment of the national debt; Elimination of handouts to farmers, shippers, educators, businessmen, etc.; Abandonment of the double standard that holds businessmen liable for fixing prices, but doesn't indict union leaders for fixing wages; Reformation of school curricula that neglects teaching of free enterprise and offers hardly any courses in economics.

Second Session

Audience Ignited at Public Relations Meeting

Major Fred Bove, supt. of Brentwood CC in L.A., was the meeting's chairman. The theme was "Public Relations at Work." Bove introduced Tom Leonard, supt. of River Oaks in Houston; five members of a San Diego Toastmasters club, Fred Schwartz, Cy Campbell, William Loerke, Howard Gray and John Williamson; two golf industry speakers, John C. Norman of Toro and Warren McCleary of B. Hayman & Co., Los Angeles; and finally, Joseph E. Burger, public relations director for H. W. Nootbaar Co., Pasadena.

The audience may have gotten the impression that Tom Leonard anticipated the White House suggestion to get out and walk because much of his speech was wrapped up in an anatomical dissertation on pedal extremities. But the personable Texan deftly tied this into the point he was trying to make: A supt's attempt at public relations can't be just haphazard, but must have a reliable foundation. If not, said Tom, a fellow can quickly contract what is widely recognized as an occupational malady in the p.r. field — hoof and mouth disease.

Leonard advocates two things that every supt. would do well to keep in mind if he is serious about advancing his favorite cause — his own. The first is to always be prepared to speak, whether to an individual or to a group of people. "You're not cheating," the Houston turfman said, "if you memorize two or three verbal gems just in case the meeting chairman or the toastmaster happens to call on you."

Tom's second piece of advice is to develop slides or film, or both, that can be shown to persons who are interested in turf. "Many people," he stated, "discover that course maintenance is unusually interesting work upon being exposed to how it is carried on. If you're going to further the cause of our craft, you'll go out of your way to show them how it is done."

How to Build A Speech

The Toastmaster quintet, composed of young San Diego businessmen, gave a detailed description of how a speech is organized, analyzed and criticized. To any person who has trouble in getting untracked when he is called to the lectern, they offered these helpful hints: Outline the speech and stick to the sequence; Memorize the opening and closing sentences; Practice as much as you can in front of a live audience even if it is only composed of your suffering wife.

Don't Play It By Ear!

John Norton, Toro's sales and advertising manager, said that most industrial and commercial public relations campaigns fail because they are poorly organized. "A company may take great pains in setting up its advertising program," he stated, "but too often it may play the p.r. campaign by ear. It's no wonder that the latter falls on its face. If the publicity program for the year is carefully planned, it can not only be highly effective in its

(*Article Continued on page* 96)

(Golfdom Luncheon Photos — page 92)

Only a few of the boys looked up in these photos, so the food must have been good. Ben Chlevin (r) led the community sing.

Golfdom Luncheon

Fathers, sons, sons-in-law and GCSA officials were guests at the Golfdom luncheon, which has become a fixture at supts' conventions. It was held for the sixth time this year and about 70 persons crowd-into the El Cortez's Cotillion room to snap chicken wings and talk turf with Herb Graffis and his staff. Joe Graffis, who had been a regular at the host table since the luncheons were started in 1958, wasn't able to attend the convention due to a prior commitment.

own right, but helps to give the advertising effort more punch."

Toro, Norton said, tries to win public acceptance by concentrating on five things in its p.r. program: Letting people know that it is primarily service minded; quality conscious; and civic spirited. It plugs attention to its research whenever possible and, finally, the Toro firm tries to impress the customer that it realizes it has an obligation to build the best possible product.

Salesman Best P.R. Man

Practically the entire public relations effort of B. Hayman & Co., said Warren McCleary, the firm's turf equipment director, is channelled through the sales staff. "We think," McCleary stated, "that we're being more realistic that way. The fellow who is out visiting golf courses every day is our eyes and ears and, in many cases, a large part of our brains. He hears all the complaints and, in that rather rare instance, the good things that are said about us.

"The salesman," McCleary continued, "can usually tell us when there is need for improvement in our products and when, perhaps, a new product is either needed or wanted. Finally, and probably most important, he is building goodwill for us. Sooner or later that leads to acceptance of the thing we're selling, and that is what people in business are striving for."

Perseverance Makes the Sale

The second most talked about actor in the GCSA educational drama (right behind the reformed Russian) probably was Joseph E. Burger, the finalist of the public relations program. Mr. Burger, gentleman, is an old podium pro. Like most of them he is touched with brimstone around the edges, but down the middle he burns with a true white flame that quickly gets an audience ignited. He had the greenmasters on the edge of their seats all the way even though, according to the clock, he sneaked in about six extra holes. But nobody seemed to mind.

The gist of Burger's remarks was that every man is a salesman whether or not he wants to be. Definitions of what a salesman is probably are as numerous as salesmen themselves, but Burger tried to restore order to all these speculations in this way: The first requisite of a salesman is character; next is industry; then comes ability; No. 4 is courage; and, finally, a fellow has to have a taint of personality. Enlarging on these points, Burger said that statistics prove that 46 per cent of all salesmen back out the door without scoring on their first call, and that 60 per cent of all sales are made on the fifth.

Maybe the moral is the grubworms won't get the hell off your property until you give them five passes with the spray boom.

Third session

Uclans Tell of Studies in Turf Technology

John Madison, assistant turf specialist at the U. of California, Davis, introduced a group of UCLA professors who, dwelling on the advances in turf technology, discussed water resources, plant responses and slo-release fertilizers. These speakers were Warren A. Hall of the water resources center, Victor B. Youngner, assistant professor and turf specialist, and O. R. Lunt, associate professor in the agronomy school. At the conclusion of the meeting, the Bell Laboratories' weather film, "The Unchained Goddess", was shown.

The water situation in the West is critical, according to Warren A. Hall, because much of the water now available is too salty for human and agricultural consumption. Historically, federal usurpation of states' rights hasn't done much to alleviate the overall condition. There is no guarantee that things won't get worse before they improve because the supreme court traditionally upholds the right of the federal government to intervene and divert water resources to its own use. California, the UCLA expert said, is presently contemplating spending $1.7 billions to improve its agricultural and recreational waterways, but it has no guarantee that Washington once again won't step in and exercise total or partial jurisdiction over the improvements.

The federal government isn't the only one that has been guilty of unwise handling of of the water problem, Hall continued. Forty or fifty years ago, and even more recently, states, local governments and even individuals staked out reservation rights that were in too many cases inequitable. The result is that a precious resource was grossly wasted. More beneficial use of water is being made today, but the

situation is still confusing and will only be straightened out when the different governmental bodies agree to a common sense compromise.

Temperature Range Important

Victor B. Youngner, who for several years has been studying the factors of light, humidity and temperature in relation to plant growth, emphasized that there is no set pattern for the way in which different species react in their environments. The genetical constitution of any plant has much to do in determining its chances of survival, but sunlight intensity and the daily heat range or differential of the environment in which it grows are important if not equal factors.

Bluegrasses, for example, do not grow well in Southern California. It is not because they don't receive enough sunlight but because the diurnal heat range is too narrow. In addition, the annual temperature range in this part of the U.S. is not wide enough for bluegrass growth and propagation since it is recognized that deep chilling of a plant in the wintertime produces strong flowering in the summer. It is because of this that Kentucky blue thrives in the Mojave desert.

Sunlight Not Enough

In Youngner's opinion perhaps the most neglected or overlooked factor in the growth of many plants is the nighttime duration of their environment. It is erroneous to assume, he said, that long, intense sunlight is the secret of growth. Bermudas need only about half as much light as bluegrasses and zoysias and red fescue about one-quarter as much. The only time this does not hold is when stolons of any grass type are planted. All need approximately 12 hours of strong sunlight when they are taking root. Thus, Youngner recommends that stolons be planted in June.

Speaking of poa annua, the UCLA turf specialist, said that it can survive only when the surrounding grass is cut low. It has a weak genetical background and thus is poorly adapted for any environment. The photosynthesis process has to work overtime to keep it alive, something it can't do when neighboring grass shuts off its sunlight supply.

Tells of Fertilizer Studies

Conclusions reached from the study of the characteristics of five new slow-release fertilizer material types were reviewed by O. R. Lunt, third of the UCLA faculty representatives to appear on the program. The fertilizers were classified under these headings: Coated, low solubility, organic, synthetic organic and ion exchange.

The Brinkworths of Canada descended on the GCSA conference in force They are from l to r: W. H. (Babe), Hubert Cooke, W. H. (Bill) and Gordon. Cooke isn't an outlander, being related to the family. Bill, who has been at Jasper for 27 years and 55 years all told in the turf field, was given a Gold Bull by Toro Manufacturing Corp. at the show. It's the first time the award has gone to anyone other than a Toro employee.

Coated (plastic covered) fertilizer was described by Lunt as being promising. In moist soil, this material dissolves at a quite steady rate, with the thickness of the coating and the moisture content of the soil largely governing the speed of release. Sulfur coated fertilizers show some promise, Lunt said, and may possibly be developed at reasonable cost.

Occasional But Not Steady

Low solubility types, the UCLA agronomist remarked, supply N on demand but a type such as metal ammonium eventually reach the point of no return. It reacts favorably in a moist environment but slows down appreciably as an extreme dry condition is approached. The conclusion is that metal ammonium is a fine compound for occasional but not steady feeding, and probably is best suited for shrubs, etc.

Organic sludge, Lunt said, depends largely on microorganisms to break it down and the same can be generally said for synthetic ureaform. The latter, however, is about 25 to 30 per cent soluble in water and this portion of the compound is quickly nitrified. Thereafter, it releases N at a fairly uniform rate. Not too much is known at present about ion exchange resins. These are water activated and react best in a near saturated situation.

The third session was concluded with

a showing of the "Unchained Goddess", a film thriller made by Bell Laboratories (Pacific Telephone Co.) to show the workings of the weather. Several cartoon characters, born of superstition and named Meteora, Cirrius, Boreas, Thor, etc., sit on a low slung cloud in this drama and are given a scientific explanation of what really generates hurricanes, tornadoes etc. An old U.S. weather bureau type rather smugly tosses such terms as synoptic, adiabatic, etc. at the confused mythological creatures and it isn't long before your sympathies are with them. The thing that saves the show and gives it at least three stars is the Coriolis Carnival, a clever sequence that shows how the earth's rotation puts a curve in the wind.

So many manufacturers showed their products at the GCSA convention that it was necessary to put them in an annex to the exhibit hall.

Fourth Session

Yankee Greenmasters Describe Their Methods

Northern and Eastern supts. presented this program under the direction of James R. Watson, Jr., Toro Manufacturing Corp. agronomist. L. R. (Bob) Shields of Woodmont CC in Rockville, Md., spoke on off-season operations and Ted W. Woehrle of Beverly CC, Chicago, described the damage done in the Midwest by the now famous ice sheet of 1961-62. A panel composed of Ernest Schneider, Big Springs, Louisville, Joe Butler, United Shoe CC, Beverly, Mass., and Ray Gerber, Glen Oak, Glen Ellyn, Ill. discussed some of the operational highlights at their clubs. The final speaker, John T. Singleton, irrigation specialist of Manchester-by-the-Sea, Mass., explained the installation of sprinkling systems.

Boosts Employees' Attitude

In order to keep the maintenance crew busy in the wintertime, said Bob Shields, a supt. has to do some pretty extensive summertime planning. When he resorts to spur-of-the moment decisions to keep his men either looking busy or out of sight during the cold months, very little is usually done that is constructive. Shields ticked off a long list of jobs that ordinarily need to be done, and suggested that they be worked in around a major project such as landscaping or machinery overhaul.

At Woodmont, Bob said, he has a program that has given a big boost to employee morale. Members of his crew meet regularly to discuss maintenance problems and review routine. Their education is furthered by studying diagrams and charts and viewing slides. Every so often the Rockville menage makes a trip to a neighboring course to get ideas on practices it can fit in with its own.

Describes 1961-62 Glacier

Ted Woehrle, one of the GCSA's own, and suspected of doing some moonlighting in recent months in public speaking classes, gave an excellent description of the damage caused throughout the Mid west in 1961-62 by what almost amounted to glacier conditions. Many courses were locked under an ice sheet for about 100 days in that trying winter and when the thaw finally came, the majority of their greens were found to be in pitiful shape. It was agreed that the ice cover had so compacted the turf that oxygen was shut off and such a heavy concentration of carbon dioxide was built up that roots and blades simply didn't have a chance.

It took a crash program to bring the greens back, Woehrle said. This consisted of multiple aerification, verticutting of dead areas, extensive re-seeding, fungicidal treatment and light but regular fertilizing. Some supts. used polyethelyn covering to speed up germination. At courses where it was possible to remove or break up the ice cover during the warm weather breaks, damage was not severe, Woehrle concluded.

Converts to Bermuda

The Yankee panelists, Ernest Schneider, Joe Butler and Ray Gerber, it was noted

spoke from the experience of something like 120 years in the turf business. Schneider told how he had converted more than 50 acres of fairways at his club from what passed as bluegrass to Bermuda. Actually, said Ernie, the switch was from chickweed, crabgrass and goosegrass, as the quota of these for the entire state seems to have been concentrated at Big Springs.

To get rid of the old and prepare for the new, it was necessary to saturate the fairways with chlordane, sodium arsenite and 2-4-D, and thatch and sweep from every direction. After the U3 was planted, it was fed four pounds of N per 1,000 square feet the first year and density and uniformity of growth exceeded expectations.

A New Menace

After giving his recipe for frost removal in the late fall (sprinkle tees and greens for five minutes when the temperature drops to around 25 degs.), Joe Butler, who oversees 36 holes at United Shoe, told of a new menace. It is the maintenance of a bowling green, with which more and more supts. are going to have to contend in the future.

"The trouble is," said Joe, "that members are fussier about a green of this sort than a putting green. They get to know every blade on the greensward and you're not allowed to disturb anything. Ours is sunken and collects ice and water, but installing drainage is out of the question. The oval ball," continued Butler, "used in bowling is weighted at one end and describes a crescent when rolled. This does absolutely nothing for the turf."

The best method for maintaining a bowling green in Butler's terse estimation is to dig it out and put a swimming pool on the site.

An Artist Speaks

Ray Gerber, the squire of Glen Oak CC in Glen Ellyn, Ill., and rated one of the best supts. in the Midwest, may be an even more accomplished floriculturist. The films he showed of his flower bed arrangements would have had them "ahing" and "ohing" at the women's Wednesday afternoon garden and poker club. One of the most impressive of Gerber's outsize bouquets is a clubhouse grounds arrangement of cannas, salvia and petunias. Scattered around his course are zinnia beds,

(*Article Continues on page* 108)

(GCSA Women Visitors — page 106)

TeeBirdie

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One nice thing about GCSA educational conferences is that the women always have fun. It gets them away from those hot ranges, formulas, dust cloths, etc., gives them a chance to take boat trips, visit zoos and a dozen other things they have wanted to do.

hydrangea clumps, tees laced with spirea, birdhouses mounted on high poles and paths outlined in nosegays. Artistry is stamped on the way in which he curls flagstone passageways through his beds. A June day at Glen Oak must be rarer than even the poet described it, but it's all in keeping with Gerber's outlook: "There's a lot of green in a golf course," says he. "It can become awfully monotonous, so I try a dash of different colors here and there to make the course more interesting."

Water Conservation Needed

John Singleton, irrigation specialist, predicted that in the near future, water system installations for courses and other large turf areas will be computerized. The result will be that a near ideal combination of pump capacities, pipe sizes, velocities, etc. for different soil and turf types will emerge. In his speech, Singleton emphasized that piecemeal installation of a sprinkling system invariably turns out to be extremely costly. He also suggested that clubs closely examine the expense of hiring a night water man at time and one-half wage rates and compare it on a long-time basis with the cost of putting in an automatic system. It may change some thinking.

Alluding to the overall water situation, Singleton said that it is not promising in the East or Midwest. "Conservation not only is needed but soon will be widely enforced in both these areas," he remarked. "Clubs would be wise to insure future water needs by going automatic, a sure method of conserving water. If they prepare for what is foreseen as the most adverse condition in their part of the country, they won't be too badly off when the pinch comes."

Fifth Session

Maybe It's Tougher in the Southwest

Mark S. Gerovac, supt. of Oro Valley, Tucson, introduced the speakers at this gathering. They included: Donald Hogan, irrigation engineer, Seattle; Roy L. Goss, agronomist, Western Washington experiment station; James L. Haines, Denver CC, Arthur A. Snyder, Paradise Valley, Scottsdale, Ariz., and Kenneth L. Putnam, Seattle GC, the supt. panelists; E. Ray Jensen, Southern Turf Nurseries, Tifton, Ga.; and Carlton E. Gipson, Club Campestre de la Cuidad de Mexico, Mexico City.

Describes Western Irrigation

Discussing the technicalities of automatic irrigation in the West, Don Hogan said that it has been only in the last seven or eight years that semi-automatiic, and later, automatic equipment, have been used on a wide scale. The trend in both systems is to smaller coverage patterns, Hogan pointed out. As for types of installation, quick coupling, impact head are most common in semi-automatic, and hydraulically operated, diaphragm types that are electrically controlled are favored where automatic systems are used.

The Seattle irrigation specialist gave a quite detailed description of the materials used in both semi-automatic and automatic installations. He estimated that it costs around $120,000 to put in the former on a multi-row, complete coverage basis for 18 holes; cost of the automatic runs around $150,000. Hogan predicted that fertilizer application through the irrigation system soon will become commonplace.. The secret of getting uniform distribution of fertilizers or, for that matter, any chemical, is to establish constant precipitation rates. This is something that is theoretically simple, but occasionally calls

Comes from Switzerland to Attend Convention

Donald Harradine, golf course architect and consultant, who lives in Caslano, near Lugano, Switzerland, travelled the longest distance of any of the visitors who came to San Diego to attend the GCSA conference. He estimated that he covered at least 7,000 miles in making the jaunt which included a pre-conference sidetrip to Mexico City.

Harradine, a native of England, has been in the golf business since before World War II. He has designed and constructed about 100 courses throughout Europe and, at present, serves as a turf consultant for 52 continental clubs. Some of his more recent projects have been for the American Army in Dijon, France, at Bad Pyrmont in Germany for the British Army, and a municipal course in Athens, Greece that he designed and built. Penncross seed for the greens at the latter installation, as well as Bermuda and Merion for the fairways, were imported by Harradine from the U. S.

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Year-Around Play Hurts

Roy Goss, who carries on his turf research work in that town with the slightly unbelievable but intriguing name of Puyallup, said that a Northwest supt. may be working at a disadvantage when his plight is compared with that of a Eastern turfmaster. Overall day light intensity is less in the coastal states than in other parts of the country, and this area is plagued with an overirrigation condition from September through May that badly upsets the whole drainage picture. If these things aren't bad enough, the fact that golf is played year around adds to the aggravation.

Serious compaction problems result from 12-month activity, Goss stated, especially where poa annua is involved. Desirable grass is stifled by winter traffic but poa, of which there are some 50 varieties, seems to escape unscathed. This is why it becomes dominant in the Northwest in late summer.

To compensate for winter play, Goss said that supts. in the coastal areas tend to overfertilize. This causes as much trouble as underfeeding since lushness undoubtedly increases disease activity and probably results in vital potassium being reduced or neutralized. At present, the Washington experiment station is carrying on quite extensive compaction tests to determine what kind of soil mixes hold up best in the coastal area, but results aren't yet conclusive.

How to Handle Employees

Three old pros who have put in a total of about 120 years in the vicinity of the maintenance buildings, Jim Haines, Art Snyder and Ken Putnam, discussed some of the practical aspects of turfkeeping.

Haines spoke on crew operation and management. He said that the biggest failing in handling employees, whether it's in the golf business or some other one, is lack of communication. In most cases, the supervisor is at fault. In too many instances, the Denver CC supt. stated, notices of changes in working conditions or even jobs are withheld from the employee until the last minute. This has an unsettling effect and, in the final analysis, works to the disadvantage of the supervisor since the worker is slower than he would ordinarily be in adjusting to the new situation.

With the Denver CC since 1928, Haines has a handful of men who have been with him all those years. That gives added weight to the points he stressed in pro-

Speakers at the first forum of public course administrators, held in conjunction with the GCSA show, were (l to r): Guy Bellitt, Southern Cal. PGA; Charles Pinney, El Centro, Calif.; Bill Sherman, National Golf Fdn.; Gene Reid, Tucson, Ariz.; Don Makie, San Diego, and Dick Sincerbeau, Flint, Mich.

moting longevity among employees: Tell them what is expected of them; Don't withhold praise or a raise; Try to develop versatility among the men in your crew; and, Always be on the lookout for latent ability.

Matter of Adjustment

Art Snyder, a transplanted Pennsylvanian who moved to Arizona about eight years ago, said there is quite a difference in eastern and southwestern maintenance practices. When a fellow makes the move, said Art, he has to quickly learn how to adjust to 120 deg. temperatures, lack of rainfall and constant play or it won't be long before he is heading north again. The soil situation, too, can be puzzling because there is a great variety of it. None of it is promising because of its sticky, sandy or salty makeup.

Yet, said Art, fine and common Bermuda grasses can be grown in the desert country if a supt. sticks to the rules. Seaside and penncross are proving themselves, although the latter produces no better than a fair root system and still is pretty much in the test stage. But bents, Art concluded, have on advantage over Bermuda: they aren't nearly as susceptible to disease.

Putnam's Sunken Garden

Ken Putnam described a wholesale resodding job that is now going on at his Seattle GC. More than 50 acres of fairways have been completed and there are nearly that many that remain to be worked over. The course was built on virgin timberland and the depressions left by removal of tree stumps never were properly compacted. In recent years the place had become one big sunken garden.

Using film, Putnam showed how a supt. tackles a project of this kind. Great quantities of rock had to be removed, topdressing hauled in and concentrated doses of lime and fertilizer applied. The sodding operation is carried out with the aid of a fork lift and large pallets on which 1¼ in. sod sheets are piled in 12-inch decks. It is possible to cover from one to one and one-half acres in a week. The original cost of the project was $500 an acre, but as Putnam and his crew became a little more adept at the work, they reduced this to about $450.

Stolon Planting Methods

Ray Jensen, who started the Southern Turf Nurseries about 12 years ago and has made important contributions to the development of Bermudagrass, used slides in illustrating planting methods. A stolon planter with a single roller and double-row cutting discs that his firm developed, is capable of sowing 8 to 10 acres a day with an eight man crew. The front disc is heavier than the back one to insure pressing the stolons deep into the soil, and when the soil is hard to penetrate, weights can be attached to the machine.

Jensen told how he once experimented with a tobacco planter in laying stolons, but it was so unwieldy that his crew could cover only two acres a day with it. He unwisely stayed with the machine in handling a stolonizing job for an entire course and is still writing off the loss. That was the last of experiments of this kind.

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For hand planting, the Southern Turf owner recommends spotting the stolons about 18 inches apart. Whenever a stolonizing job is undertaken, whether by hand or machine Jensen suggested that these things be kept in mind: The bed should be well cultivated; a generous application of quick-acting fertilizer should be made; a weed control program should be started immediately; and post-planting irrigation should be on the heavy side.

Maintenance in Mexico

One of the convention's prize speakers turned out to be Carlton Gipson, a one-time Texas soil scientist who, two years ago, moved south of the border to supervise the maintenance of a Mexico City course. Gipson said that the art of greenkeeping is still in its infancy in Mexico. One of the drawbacks, paradoxically, is that a supt. has too many men to supervise. Courses may have as many as 40 to 85 grounds employees.

They constitute a formidable hand-weeding crew, but they don't understand the intricacies of machinery and find more ways to throwing it out of adjustment than an army of master mechanics could hope to correct.

Courses in and around Mexico City generally are good ones but the same can't be said of those in the outlying areas. Fifty per cent of the country, Gipson pointed out, is arid or semi-arid and there is also much alluvial clay. The various Bermudas are best adapted to the Mexican soil, although bents such as Seaside and Penncross could survive in the central part of the country. Poa, however, thrives and has a tendency to crowd out bentgrass, and for that reason it is intensely cultivated. Mexico's answer to crabgrass is elephant grass.

Gipson said that seed, much fertilizer, and replacement parts for machinery have to be imported. A fellow has to develop a sixth sense in ordering these things for enough ahead to have them on hand when they are really needed because it takes a

(*Continued on page* 167)

Turf Dates

Mar. 12-14 — Turfgrass short course, Iowa State U., Ames.

Mar. 21-22 — Michigan Turfgrass Conference, Mich. State U., East Lansing.

Mar. 27-29 — Ontario Agricultural College, Guelph.

GCSA Convention

(*Continued from page* 114)

long time for them to clear through customs. Sulfate of ammonia is the most common fertilizer although the birds give a supt. a big lift by delivering plenty of guano for the greens.

Sixth Session

It's Supts' Day at the Meeting

Fred V. Grau, consulting agronomist for Hercules Powder Co., handled the introductions at the sixth all-supts. session. His list of speakers included Joe B. Williams, Santa Ana (Calif.) CC; John L. Kolb of Minikhahda in Minneapolis; Clifford A. Wagoner of Del Rio G & CC, Modesto, Calif.; and Ted J. Rupel of Cherry Hills in Denver. Panelists for this gathering were Charles F. Shiley, North Hills, Milwaukee, Paul N. Voykin, Briarwood, Deerfield, Ill. and Robert V. Mitchell, Sunset CC, Sappington, Mo.

The first speaker on the "Course Management Aids" program, Joe Williams, may have been the busiest man at the GCSA conclave. He handled the stage props in the 750-seat convention hall, was a semi-official photographer, and as a member of the host Hi-Lo chapter, had a full week of shaking hands and greeting visitors. If the pressure took its toll of Joe it wasn't evident in his speech, one of the best of the conference.

Would Enlarge Training Plan

Williams encouraged supts. to break away completely from the still deeply entrenched and hidebound attitude that training an assistant may mean training a replacement for the greenmaster's job. "We have an obligation to ourselves and the club," said the Santa Ana turfman, "to have a No. 2 man on hand to take over in our absence. Sickness, emergencies and the need for taking occasional vacations are unavoidable. If nobody is capable of filling in for us when we're away, we'll find that we wish we had trained someone to backstop us. Looking at the situation from a larger viewpoint," Williams continued, "enough supts. are retiring each year to make us feel obligated to provide replacements for them from our own organization."

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The Santa Ana supt., who has been carrying on an assistant training program at his club for several years, outlined how it works. He hires young men who are attending college and majoring in agriculture or horticulture and gives them part-time and summertime work. This comes only after Williams has thoroughly checked their grades and interviewed them to determine, if they have the desired aptitude. While the students are in training, they not only are taught every phase of maintenance but records are kept on their progress. Joe also insists they learn to play golf so that they get a full understanding of the player's viewpoints. So far, five of the young men who have worked for Williams have graduated to greenmaster's jobs.

"Fundamentals of Equipment Handling" was the subject of the discussion by Jack Kolb, who also gave an excellent account of himself on the podium. His speech was broken down into two parts, one on the handling of equipment, and the second, calibration.

Must Understand Machinery

Under the subject of handling, Kolb said that the operation of each piece of machinery should be thoroughly understood as to both performance capabilities and limitations. Familiarity, too, with the cleaning and servicing of all course equipment is another requisite. It is only when these things are fully grasped, the Minikahda supt. said, that a person in charge of the maintenance department can train men to service and repair mowers, tractors, etc., and then determine if these things are being properly done.

Calibration, Kolb stated, calls for close adherence to manufacturers' specificiations as well as frequent testing. Tire pressures, for example, should be frequently checked to prevent damage to both turf and machinery. Calibration, such as between

a sprayer and boom, should quite often be tested out on the job to make sure the spray unit is delivering the prescribed amounts of fungicides, herbicides, etc. Spreaders, hand sprayers and accessory equipment also should be similarly checked. Kolb warned against taking mower settings for granted, saying that it isn't unusual to make three or four bench adjustments and end up with as many different results even though the same setting is desired in each instance.

Intelligent Interviewing

Cliff Wagoner, who has worked as a supt. in Northern Calif. since the end of World War II and is a member of the USGA green section committee, explained some of the techniques of hiring men and breaking them in. "There are two methods of hiring," Wagoner pointed out. "One is rather passive and doesn't give you much information about the applicant. Here, you put Yes or No answers into the fellow's mouth and never really get him to open up.

"You'll have a much more informative interview," Wagoner continued, "if you contrive questions that make the prospective employee do some of the leading. Let him explain some of the answers he gives. If you say, 'Is your health good,' you know beforehand what the reply will be. But if you ask, 'How many days have you been off because of illness?' you'll probably get a real insight into the applicant's health. It's all in the way you ask the questions."

Training starts, Wagoner said, by giving the employee a full briefing on what is expected of him. At the same time, be sure he knows everything the job offers in the way of promotion and salary prospects and is familiar with the fringe benefits. One of the first things a supt. should do is instruct the new employee in golf etiquet. It also doesn't hurt to explain the game to him if he doesn't know much about it. On the job, Wagoner stated, instruct by example, stress that there should be uniformity of maintenance on every hole and above all, impress the new man with the fact that he should always try to use good judgment.

How Not to Groom

Ted Rupel, the Colorado State U. alumnus who has been at Cherry Hills for nearly 10 years, discussed course grooming. Rupel approached his subject in a rather oblique way by citing things that should

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be neglected if the supt. wants to win a course rating of something near .000.

"Don't pick up any debris," Ted advised, "but let the mowers chew it up and the wind carry it away — Skip the trimming — you injure the grass . . . Leave the rough and the area around the ponds and lake uncut so employees can step up the harvest of lost balls . . . Let the wind pile up the leaves — that will take care of composting.

"The really ironic thing," Rupel concluded, "is that at a few courses I've seen they seem to have anticipated the advice I'm giving here."

The panel of experts for the sixth session included Charley Shiley, who has been at North Hills in Milwaukee for 11 years and in the turf business for 27; Paul Voykin, a suave young man who reads books such as Tarus Bulba in the raw Russian; and Bob Mitchell, one of the GCSA's top golfers and who, after getting a degree in Business Administration, turned to the soil to make a living.

Camera Is A Useful Tool

Shiley stressed the value of using Kodaslides in keeping permanent office records, and urged supts. to invest in cameras so that they can detail course conditions, construction, landscaping operations, etc. for reference and future study. A camera is a further aid, Shiley said, in making a record for insurance claims for any damage to the course, clubhouse, etc., that is caused by weather or vandalism. It also comes in handy for persuading committees and club officials that improvements or changes in the course are needed.

Reports Can Save Jobs

Ideas for the makeup periodic reports for club officials and members were outlined by Paul Voykin. These should include weather summaries, statistical information on the consumption of water and the use of fertilizers, any changes in maintenance procedures such as reduced or increased cutting heights, notices of new construction, etc. "When you can quote some impressive cost figures," Voykin emphasized, "be sure to get them into your report." The Deerfield, Ill. turfmaster also includes terse reminders to repair ball marks and divots, and makes requests such

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as not to disturb the duck hens that are nesting near the lake in anticipation of a further population explosion.

"Some supts," Voykin observed, "regard reports as so much paper to be tossed aside. But they shouldn't overlook the fact that reports become a part of a record that, in some cases, can save a man's job. Just a year ago, for example, some Midwest supts. were hard put to explain the ravages of winterkill. Because of it a few of them were three-quarters of the way out of a job. Those who had weather reports to back up the claim that they had to cope with extremely adverse conditions didn't have nearly as tough a time in explaining what had happened as supts. who never bothered with them."

Fashion Note — On Ladies Day at Voykin's Briarwood club, Paul introduces an artistic and imaginative novelty that has greatly impressed the feminine swingers. He removes the regular tee markers and substitutes potted flowers, such as geraniums, in their place. It doesn't take much more than an hour to make the switch.

Dealing with The Committee

Bob Mitchell spoke on the makeup of the green committee and the conduct of meetings with this group. The committee, in his estimation, shouldn't have any more than four or five members and, if possible, should include a high handicapper, a fair golfer and a good one so that their opinions represent the views of the entire club. When a new group comes into office, Mitchell said, it is to the advantage of the supt. to thoroughly explain the maintenance picture. Then, the committeemen have some idea of what course upkeep entails, and can either make intelligent decisions or don't interfere with those that have to be made.

Keep It Moving

As for the conduct of meetings with people on the green committee, Mitchell said that the supt. should bend over backwards to hold these gatherings at their convenience. He pointed out that if the greenmaster doesn't take it upon himself to prepare an agenda, the meetings many times are pointless. However, it should be recognized that the green chairman is in charge, regardless of whom may prepare the discussion schedule. Finally, Mitchell cautioned his listeners that the supt. has an obligation to keep the committee members fully informed as to what goes on in his department. The withholding of information, he said, too often works to the disadvantage of the supt. in the long run.

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Seventh Session

Public Players, Cars, Diseases Try Turfmen

Charles G. Wilson, agronomist and sales manager for the Milwaukee Sewerage Commission, was in charge of the final program, the theme of which was "Practices and Problems." The speakers' roster was made up of the following: Earl F. Yesberger, owner, North Olmsted (O.) GC; B. K. Jones, director of golf for the City of Long Beach, Calif.; Donald E. Leaman of the Neil A. MacLean Co., El Monte, Calif.; George Lanphear, supt., Thunderbird CC, Palm Springs; Paul J. Addessi, supt., Tamarisk CC, also in Palm Springs; Leland Burkhart, U. of Arizona horticulturist; Norman R. Goetze, Oregon State College; Chester J. Gould, Washington State experiment station; and James L. Holmes, Midwest agronomist for the USGA.

They're Hard to Please Now

Earl Yesberger, who almost single-handedly hacked his North Olmsted, O., course out of the wilderness over a period of 10 years, was the first speaker on the last lap of the San Diego talkathon. Because of golf's explosive popularity, Yesberger said that year after year the owner of a semi-private layout is faced not so much with new problems, but larger ones. The tyro golfer of only a few years ago is becoming harder and harder to please because he is constantly becoming more aware of the refinements of both golf architecture and maintenance. Where he once might have overlooked shortcomings in a course, he is disturbed by them now.

This is not a thing to be decried, however, Yesberger said. The course owner should encourage criticism, if it is justified. It enables him to correct the things that are obviously wrong and thereby build a larger following or clientele. If he mects the players halfway, he wins their loyalty. It's the loyalty of the regulars, in the final analysis, who keep the semi-private course operating.

Muny Supt. Is Hamstrung

B. K. Jones, Long Beach's director of golf, suggested that the supt. of a public

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course, where from 75,000 to 100,000 rounds are played annually, should get the equivalent of a Purple Heart every 12 months. A man at a private club, Jones pointed out, usually is given authority to take necessary steps to protect the course. This isn't always so at a public layout where the greenmaster constantly is hamstrung by that worn-out challenge, "I'm a taxpayer." More and more municipalities are giving their supts. the kind of support that is needed to put the unthinking or uncompromising golfer in his place, but even they can only go so far.

"Once again," said Jones, "it's a very small minority that gives public course players a reputation for being rather poor sportsmen. The situation isn't improving very rapidly. Many new players take up golf each year and some kind of natural law dictates that there has to be a certain number of obnoxious people among them."

Improve Soil Fumigation

Donald E. Leaman, a technical sales director in the chemical field, told of the great improvement that has been made in the application of poisonous methyl bromide, used in soil fumigation. Where once it was necessary to laboriously cover an area with a plastic tarp before circulating the gas, it can now be done much quicker, Leaman said. The fumigant is mounted on the draw bar of a tractor. Then, within 30 minutes of this application, covering is accomplished by rolling a thin polyethylene film over the treated ground.

In fact, an alternative method to the one already described may even be quicker, according to Leaman. An automatic tarp layer not only injects the bromide, but rolls out and lays the tarp in a single operation.

Inevitable Car Discussion

George Lanphear and Paul Addessi, supts. at neighboring clubs in Palm Springs, who often get together to trade notes, teamed up on the inevitable golf car discussion. (No longer do the greenmaster bemoan the use of the vehicles on their beautiful acres — they've joined them.) Both George and Paul are well qualified to give tips on path layouts and traffic since their courses are veritable freeways. Here is a summary of what they said:

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play to go on in everything except heavy rain.

Before paths are put in, the underlying soil should be thoroughly sterilized to cut down on encroachment of grass and weeds.

The initial cost of asphalt is somewhat higher than gravel, but the upkeep is about the same for both. At both Lanphear's and Addessi's clubs, the latter runs around $10,000 a year.

If a new course is being built or an old club is introducing cars, a good deal of thought should be given to their possible expanded use five or ten years hence. This applies to the layout of the paths as well as garaging and repair facilities.

A panel of experts representing universities and experiment stations offered several observations the supt. can apply in his work. Leland Burkhart of the U. of Arizona discussed trees for the Southwest courses; Norman Goetz, Oregon State weed specialist, dwelled on turf management aspects in the Northwest; and Charles J. Gould, Washington State U. plant pathologist, explored some of the factors in disease control.

Trees for the Southwest

Architects, landscapers and the supts. themselves, said Burkhart, are handicapped because a wide variety of trees aren't available for courses in the Southwest. However, some imported species are slowly helping to solve the dilemma. Evergreens continue as standbys because of their adaptive qualities and year-around hardiness and because they fit quite nicely into the golf landscape.

Battle with Disease

Norman Goetz said that the condition of courses in the Northwest depend to a great extent on the whims of the Pacific. Generally, the absence of summer rainfall and an overabundance of it in the winter, along with mild temperatures in the latter season, pose many diseases problems that remain to be solved. However, improved drainage and more thoughtful fertility programs are enabling turfmen to neutralize some of the damage caused

by disease. But much remains to be done in this area, Goetz concluded.

More Grass, More Parasites

Turf diseases, observed Charles J. Gould, actually seem to be on the upswing. It may be partly because more of them are now being recognized. But probably more than this, it is due to an actual increase and spread of various parasites as larger areas are planted in grass. What is behind all this? Some experts, said Gould, blame it on overfertilizing; others say it is because of lack of nutrition. It is known that too much nitrogen gives rise to at least two diseases. On the other hand, lack of it, encourages two others.

Feeding practices, the Washington pathologist concluded, undoubtedly are contributing causes. But some turfmen lose sight of the fact that faulty fungicide treatments may be the real culprits. It isn't enough to make mere applications. The supt. has to be sure he is using the right antidote at the correct rate. He also has to be sure that he is making regularly scheduled treatments and covering all and not just part of the stricken areas.

Summary Was Concise

The formidable task of summing up what had been said in the seven San Diego sessions was entrusted to James L. Holmes, the USGA's Midwest agronomist and noted nematode fancier. James L. applied himself heroically to the assignment and neatly capsuled just about all the pertinent points that had been made. Probably the most remarkable thing about his wrap-up of the conference proceedings was that he got it in in two minutes less than the time that had been allotted him.

Heads Bay Area CMAA

John Paul Jones, manager of the California GC, San Francisco, was recently elected president of the San Francisco and Bay Area chapter of the CMAA. Other officers are Joseph E. Castillo, Pennisula G & CC, San Mateo, vp, and F. H. Bishop, Olympic Club, San Francisco, sec.-treas.

Florida Turf Conference

Second annual turf conference and trade show of the Florida Turfgrass Assn. will be held May 2-4 in the Seville Hotel, Miami Beach. Demonstrations of equipment and inspections of experimental plots are scheduled for the Plantation Field Lab in Ft. Lauderdale from the 2nd through the 4th.

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