A record attendance and a program balanced well between the economic, agronomic and recreational phases of golf course management made the 38th turfgrass conference and equipment and supply exhibition of the Golf Course Supts. Assn. one of the most valuable business meetings to be held in golf this year.

The superintendents, gathering at Washington (D. C.) Hilton Hotel, Feb. 5-10 had a registration of 3,045. That figure includes salesmen and 560 women—wives and daughters of superintendents. Previous high attendance was 2,475 at Philadelphia in 1964. Former record of women’s attendance was 347 last year at Kansas City.

Walter R. Boysen, for more than 30 years superintendent, Sequoyah CC, Oakland, Calif., was elected president to succeed Edward Roberts, Jr., of Fairmount CC, Chatham, N. J. Re-elected vice-president was James W. Brandt, superintendent, Danville (Ill.) CC. John J. Spodnik, Westfield CC, LeRoy, O., was re-elected secretary-treasurer. Herman R. Johnson, Quail Creek CC, Oklahoma City, Okla., Robert V. Mitchell, superintendent, Sunset CC, St. Louis, Mo., and Keith Nisbet, Westview GC, Aurora, Ont., Can. were elected directors. Richard C. Blake, Mt. Pleasant CC, Boylston, Mass., and Norman W. Kramer, Point o’ Woods CC, Benton Harbor, Mich., are hold-over directors.

San Francisco was selected for the 1968 meeting.

Ben J. Chlevin, executive director of the GCSA with an energetic and highly competent staff including Bruno Daube, Tom O’Hara, Dorothy Andrews, Kathy McLaughlin, Bonny Tomm, Barbara Nogay and Rita Engess, working with the host section of the GSCA and the association’s program and show committees put on the smoothest running big event in GCSA history.

Sectional lunches and meetings and breakfasts of equipment and supply organizations, made the days long and busy. There was also a crowded schedule of women’s events which got, among other publicity reflecting the advance in superintendents’ economic and professional status, a CBS television network shot showing a White House visit by the turfmen’s ladies.

Of the nine candidates for GSCA national office, five have college degrees. Each of the nine are prominent in civic, church and educational organizations as well as in their sectional and national professional groups.

New Light on Light in Growth

Norman Kramer, George Gumm and Ted Roberts got the opening session moving fast on the “America Beautiful” theme, a development in which golf course maintenance has been a leading factor. The usual convention “key to the city” overture was skipped for in Washington, the visitor needs a gun instead of a key. Two superintendents were victims of armed robbery during an evening’s short walk. An amusing talk by Rev. Joseph Wick gave about 1,100 superintendents — average attendance at the educational assemblies—a suggestion continued on page 32
Newly elected GCSAA officers, from left to right: Walter Boysen (Sequoyah CC, Oakland, Calif.), president; Robert Mitchell (Sunset CC, St. Louis, Mo.), director; James Brandt (Danville, Ill. CC), vice president; Keith Nisbet (Westview GC, Aurora, Ont., Can.), director and Herman Johnson (Quail Creek G & CC, Oklahoma City, Okla.), director.

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to laugh off some troubles to which the course maintenance profession is heir.

John Ott, whose hobby of making growth sequence pictures of flowers led him into a profession of collaboration with physicians, botanists and other scientists in studies of "The Influence of Light on Growth Responses in Plants and Animals," presented an exciting talk and pictures. Ott's growth sequence films for Walt Disney features and the Ott television commercials brought him into his present spot as Exec. Dr., Environmental Health and Light Research Institute.

Ott devised ingenious camera and light operations recording the effect of various types and degrees of light, temperature and moisture on plants and animals. His pictures of root development in relation to soil, fertilizer, water, temperature and light and his pictures of the possible effects of temperature and light changes in the winter rest period of grass and other plants were of great interest to the imaginative superintendents well grounded in the science of their work.

The Ott pictures gave them plenty to talk about in extending the observations and speculations they and the turf scientists had offered concerning snow mold in various places and other diseases in areas where the common fault of bad drainage couldn't be blamed. Ott warned that his studies of various type of light and emanations from TV tubes indicated that humans, animals and plants were injured by undue exposure to the rays. He also reported that areas with the range of microwave towers of telephone companies showed abnormal growth response.

Government Is In Golf

Edward Reineke, congressman from 27th district, California, and interested in golf business as a maker of irrigation equipment, told of the government's interest in golf business as a major element in outdoor recreation in keeping with its active interest in health and fitness.

Reineke, after 30 years in Washington, knows where the bodies are buried. He took the realistic attitude of urging a grab for the money, inasmuch as it has been appropriated. Eight different departments have 48 offices with various recreational programs.

He told of Farmers Home Administration, Small Business Administration, Department of Housing and Urban Development and other government outfits having vast funds available. He suggested those interested write the Government Printing Office, Washington, and, for 35 cents, get the booklet "Federal Assistance in Outdoor Recreation" and, for 30 cents, get a copy of "A Directory of Private Organizations Providing As-
sistance in Outdoor Recreation.”

The congressman said the heavy concentration of population was accenting the necessity of recreation such as golf and forcasted the play requirements would have to expand from golf to qualify for a vast use of federal funds. Reineke urged close cooperation between the GCSA as an expert, thrifty authority and the federal spenders. His recommendation appealed to the tax-paying superintendents who have seen ridiculous exhibits of federal financing of golf courses much sillier than the financing which came to a crash in the bowling alley business. Comparison of superintendents’ notes following the Reineke address, brought out laughable cases of money being blown away by government bubbleheads, including one case not very far from Washington where over $200,000 was loaned on a nine-hole course in a community whose chief and only town could be driven through in 38 seconds.

Management of a Science

Richard H. Eichner, superintendent of Santa Ana (Calif.) CC, directed attention to the pencil as tool of efficient management of golf course operation. Eichner, one of a panel that included Sheldon Betterly, Chantilly National G&CC, Richard Blake, Mt. Pleasant CC, and Warren Bidwell, Philadelphia CC, discussing problems of “Management Technique”, urged examination of every procedure on their schedule, noting the ways in which the work might be done differently, then appraisal of the old and possible new methods. He said such an examination of policies and operations would reveal hidden costs of labor, materials and machine utilization and stretch budgets that, at greatest, never are large enough to cover the work the superintendent wants to do.

Warren Bidwell outlined the necessity and nature of written communications in course management. He emphasized that written instructions are essential in the application of chemicals to golf courses. Telephone calls from the superintendent to his chairman for eventual information of the board often are more nuisances than aids, Bidwell noted, and advised written summaries of work in progress, conditions and work needed, with enough copies for all board members. He told of a job resume in seeking a new position and observed that many written applications for superintendent jobs are sadly unbusinesslike.

Stanley Metsker, Boulder (Colo.) CC, presented two of the information sheets he gives to new men on the job. One is given to all employees and specifically notes conditions of employment and the character of work, attitude and appearance expected. The other sheet is to the drivers of club vehicles. Metsker said that a little time wisely spent in getting an employee started on the job will pay the club well.

Forecasts Closer Control

Dr. Paul Sartoretto, president, W. A. Cleary Co., forecasted that industry and agricultural colleges working with superintendents will revolutionize maintenance with fertilizers, fungicides and herbicides, fed through the general irrigation system. Sartoretto opined that then, as now, keeping control of turf growth under varying conditions will be the objective and the test of the superior superintendent. He listed grass growth regulators, slow release nitrogen fertilizers pre-emergence and post-emergence herbicides and fungicide treatment, as chemicals having control values generally in direct ratio to the superintendents’ own good judgment and experience.

Howard R. Taylor presented an interesting talk and slides on golf development and course management around the world as he had observed golf business as director of the Carling Breweries tournament. Taylor cited New Zealand with 370 courses (one for every 180 golfers), Australia with almost 10 per cent of its 11,000,000 population playing golf, and Japan with more than 300 courses and
3,000,000 golfers, moving in golf faster than the U. S. He said U. S. playing and course maintenance equipment and reduced import taxes on this equipment have been important in speeding world growth of golf.

Taylor told of maintenance crews, ranging 23 men in Peru and 70 men at the Royal Calcutta, where average pay is five cents an hour. Foreign superintendents annual pay ranges from $750 in Taiwan to $6,000 in Holland where the course worker’s pay is $1 an hour. Rain, at the courses Taylor visited, ranged from 7.78 to 50 inches. The bug, animal, bird and heat problems, the abundance of labor with hand weeding still common and as many as 150 course workers occasionally being used at the Rangoon course, gave Taylor great material for his talk and pictures.

**Answers and Alibis in Research**

Veteran superintendents and turf scientists were reminded by the talk of Dr. Noel Jackson of the University of Rhode Island on “Turfgrass Disease Problems in Britain and the USA” of the summary made by Dr. John Monteith, Green Section director, after a trip to Britain. John reported he’d never seen places before where God had done so much and man so little for golf turf. It’s changed now, and the British golfers are becoming as exacting as their Yankee counterparts.

He pointed out that the area of the

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U. S. was 30 times that of the United Kingdom, but many of the miseries of the golf course managers were common. *Poa annua* trouble is international. Fungus diseases he said must be regarded as the most common cause of serious turf diseases in both countries. Creeping bentgrass and Kentucky bluegrass aren’t very much in use yet in the U. K. Overdoses of weedkiller and fungicide, fertilizer scorch, incorrect watering, mower scalp, pollution damage, gasoline and urine scorch, and vandalism are international. The Jackson talk and pictures were interesting and consoling. They reminded U. S. superintendents that golf course managers in the U. K. could match them ulcer for ulcer.

**Research Progress Cited**

In the round-up of reports on turf research conducted by Dr. M. H. Ferguson, National Research Coordinator, USGA Green Section, Dr. Eliot Roberts of Iowa State said that “of all maintenance practices, nitrogen fertilization has the most extensive and most varied influence on turf quality.” Roberts reported on five years of experimentation with nitrogen fertilizer. He said recuperative potential of grass is an important measure of quality. His summaries of summer performance in nutrient-clipping, nutrient-water, nutrient-balance relationships, disease resistance, diseases in various golf grasses
and wintering performance updated superintendents on their fertilization.

Dr. F. V. Juska and Dr. A. A. Hanson of U. S. Dept. of Agriculture Research Service reported on the studies of the influence of phosphorus levels on Merion and Kentucky bluegrass growth and phosphorus effect on preemergence crabgrass and poa annua control. High levels of phosphorus reduced the effectiveness of some poa annua control material.

Dr. Joseph M. Duich telling of "Soil Modification Research," said that modification of most native soils to enable the natural aggregate structure to resist compaction has superintendents and turf scientists coming up with about as many different answers as there are men speaking. He showed slides of the compositions of various mixtures, their porosity for moisture and air and availability of moisture. He concluded that "An ideal or 'best' mixture concept is not feasible." He added that laboratory procedure in determining the most satisfactory putting green soil is not conclusive but can be a useful guide.

Dr. James B. Beard's recommendations (Michigan State) for managing shade grasses were: thinning of trees to improve light penetration; deep fertilization of tree roots by injection; root pruning; higher mowing; fertilizing according to specific needs of grass; infrequent but deep watering.

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The conference got out of the laboratories and test plots into the workshops Wednesday morning when experts of leading mower and mower sharpener manufacturers gave demonstrations of correct use of their equipment.

"On the Job" Ideas

Paul Weiss, Jr., Concord CC, Concorville, Pa., headed a program on operating procedures which began with James Smith, Sr., of Fertil-Soil, telling about topdressing material for grass health, smooth putting surface and thatch control. Smith recommended study of the cup plug to get the story of good or bad results of topdressings. He discussed the aggregate qualifications, active organic material and economics of topdressing mixtures.

Alex Radko, Eastern Director of the Green Section, related useful ideas he'd seen being used by superintendents. Among them were lawn-type pop-up
sprinklers to water mounds around bunkers, as installed by Ed Casey at Baltusrol; Joe Moisa's way of mowing Merion bluegrass tees at Tam o'Shanter GC, Brookville, N. Y., between the markers as Merion will stand cutting under 3/4 inch occasionally but frequent cutting this short would weaken the turf; and Dennis Synder's car paths at Sciot. Synder dug out paths, put in four inches of gravel, then one inch of course sand and topped it off with tanbark. The same job is done around ball washers and fountains.

Alex noted spraying schedules, fertilizer rates, damage of insects and cute little notions for TV tournament pictures of courses as among other subjects deserving attention.

Joel B. Williams, Shorecliff CC, San Clemente, Calif., went into check points that the man who'd have to maintain a course would like to discuss with the architect. Williams mentioned size and contour, irrigation and surface and interior drainage of greens; the location, design and construction of aprons and the bunkering around the greens so scallops, drainage, erosion and handwork don't run up costs. The tees, fairways and rough come in for similar detailed check-ups. Williams is for the trend toward the old notion of multiple tees as long as they involve no special maintenance.

He stressed the need of more thorough and foresighted soil preparation with accent on fertilization greater than courses usually get in construction.

Valuable points in construction were given by Russell Roberts, Gaithersburg, Md., who talked on automatic irrigation and forecasted radio control of irrigation, soil moisture measuring devices at critical points on the course, more use of plastic pipe and "spectacular developments" in batteries powering the valves.

William Nuessle, Lake Marcos CC, San Marcos, Calif., gave a program of selecting variety of turf stolons for the conditions, and preparing greens, fairways and tees seedbed and planting that may be considered standard procedure.

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Dr. James R. Watson, Toro’s Director of Agronomy, cleared up confusion in peat classifications and helped superintendents decide what quality of peat they need for their various problems of soil improvement. His address and others on the program will be made available in full by the GCSA. Watson was followed by Dr. James Love, University of Wisconsin, who spoke on “Salinity of Water and Its Effect on Ph-Fertilizer Release,” a matter that has bothered many superintendents.

The Thursday morning session on turfgrass sod was exceptionally useful, inasmuch as sod demands of courses are increasing for new and repair work and courses. When there is the space, time, money and supervision available, superintendents want to see what’s what in raising sod, a job in which such practical

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experts as Eugene D. Johanningsmeier of Hiram F. Godwin and Son, Ben Warren of Warren's Turf Nursery, Tobias Grether, California Turf Nurseries; Wade Stith, Lynde and Roswey Nurseries, Wiley Miner of Princeton Turf Farms, and J. E. Owsley of Owsley Turf Nurseries have been highly successful. Dr. Elwood E. Deal of the University of Maryland and Dr. Henry Indyk of Rutgers University are other authorities who contributed to the schooling on sod.

These experts went into every practical phase of sod production, rating, planting and maintenance.

Experts Hold Finishing School

Major-General Frederick J. Clarke, U. S. Army Deputy Chief of Engineers in giving the superintendents a broad picture of the increasing water demands and possible sources, mentioned 18 regional studies of water resources are being made and that golf course water is among factors considered.

In a "wrap-up" of the conference with Dave Mastroleo, Fox Hills GC, Culver City, Calif., presiding, David Moote, Rosedale GC and past president of GCSA told that the golf club superintendent is being compelled to diversify in his executive and operating capacities due to the diversity of conditions under which golf clubs must operate.

Ted Rupel, Cherry Hills CC, Englewood, Colo., in speaking on ten points of the water problem, brought out that there is a long history of dry cycles and wet cycles and on this basis there should be above average rainfall for the next four or five years. There will be ample water for the future if water is properly used, Rupel declared.

Dr. Ralph E. Engel of Rutgers, in asserting that crabgrass is here to stay, eased the pain by adding that it no longer is the threat it was 20 years ago. In discussing crabgrass controls, Dr. Engel accented the

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importance of timing in applying the preemergence treatment. He stated that wrong rates of application and uneven application are major causes of control failure. He observed that most of the crabgrass control chemicals are more effective when applied dry.

John C. Schread, Connecticut Agricultural Experiment Station, told of insects building resistance to DDT and chlordane, hence recently developed chemicals are better for controlling chinch bugs, and lead arsenate spray is to be used instead of DDT to control frit fly. Clover weevil control may depend on times of treatment, Schread said. He also warned that the European Chafer, a white grub, is spreading and superintendents should consult their state experiment station or county agents if the Chafer is reaching the area.

Holman M. Griffin, Agronomist, Eastern Region, Green Section, in reviewing irrigation system developments, stated that the planning of the system must be based on knowledge of soils, turf requirements, prevailing winds, natural precipitation, local ordinances, length of the watering season, permissible hours of operation each day and source of supply. From that information the rest of the story can be determined.

Richard C. Blake, Mt. Pleasant CC, Boylston, Mass., advised superintendents to take a fresh look at themselves and their profession, and to look at others to see if the others realize a good superintendent's qualifications and his value to his employers and his community. He stated that the superintendents' profession and responsibilities have progressed so substantially that the job and its problems and prospects require that the superintendent prepare and identify himself as a leader among other leaders of business and social service in his community.