

Tenn. Conference Examines Southern Turf Problems

By FRED V. GRAU

Third annual turf conference, sponsored by Southern Turf Assn., and held at University of Tennessee, Knoxville, Jan., was attended by 75, mainly course supts. of southern clubs. Various conference addresses also were heard by university students who must have acquired some idea of the problems and work being handled by southern greenkeepers and taken at least some of this information out with them to do a public relations job for the golf turf men.

Prof. James G. Walls, a geologist and vp, Holston Hills CC, was general chairman. Dr. N. D. Peacock, vice-dean of the University of Tennessee, College of Agriculture, gave the welcome address. He has become more cordial to this specialized group each year.

Fred V. Grau gave a 30-minute talk on "Soil-Grass Relationships in Turf Production." He cited some of the difficulties encountered in growing turf of various kinds, and explained the relationship between physical soil conditions and healthy normal plant growth and stressed the need for providing the very best of physical soil conditions in order to provide for good plant growth under highly artificial and unnatural conditions of management to suit a specific use.

He cited instances of mechanical analyses of putting green soils which had been made by the Saratoga Laboratories, pointing out that in many cases the high percentages of silt and clay in the soil impeded drainage and aeration and increased opportunities for compaction which results in weak turf. As remedies for these conditions so that the turf may remain in use, he stressed the value of soil cultivation with the Aerifier and similar equipment, the addition of materials which would tend to produce a more granular, well-aerated soil, minimizing the frequency and quantity of water applied, improving lateral drainage by the use of the mole drain.

He stressed water conservation in all phases and the development of measurements and practices which would provide

more uniform playing surfaces in all categories.

Prof. Lawrence S. Dickinson, Amherst, Mass., spoke on managerial factors in turf production. He stressed limits of tolerance and cited a number of categories such as the limits in using sulfate of ammonia, in the use of water, and in the use of arsenicals. He expressed his opinion that golf courses have plowed up their fairways because of the unwise use of arsenicals. He went further into the subject of mowing, selective weedicides, and aerification, stating that he was afraid that the aerification and cultivation of soils under turf would be carried in many instances beyond the limits of tolerance. Other items included cultural costs, hidden costs, labor hours, ribbing of fairways, and examples of poor management resulting from the improper use of fertilizer.

Dr. Eric Winters, Head of the Agronomy Department, University of Tennessee, spoke of a fertilization program of turf in Tennessee soils. He has appeared on each of the three programs and this was by far the best presentation. Much of his data was drawn from pasture studies but was extremely applicable to many turf areas, the main difference being that quantities applied were much lower than would be used on turf. As a guide to fertilization for the establishment of turf he indicated that 150 pounds of P_2O_5 and 50 to 100 pounds of K_2O were ample in most cases to satisfy the deficiencies in most Tennessee soils for seedling establishment.

Sixty pounds of nitrogen to the acre was mentioned for airport seedings. This would be equivalent to 1 ton to the acre of a 3-9-6 or a 3-10-5 fertilizer, neither of which are available in Tennessee. He offered the soil testing service of the University to turf people, stating that the cost would be 50c a sample for pH, calcium, phosphorus and potash determinations. He said there is no use in testing for nitrogen.

O. J. Noer, agronomist, Milwaukee Sewerage Commission, spoke on "Southern



GOLF COURSE ARCHITECTS ELECT OFFICERS

Stanley Thompson, Toronto, Can., was elected pres. and Wm. Langford, Chicago, sec'y-treas. at the annual meeting of the American Society of Golf Course Architects at Hotel Bellevue, Bellaire, Fla., Jan. 12-15. Attending the meeting were: (L to R) R. H. Lawrence, Boca Raton, Fla., Wm. H. Gordon, Boyles-town, Pa., Wm. B. Langford, Chicago, Ill., Stanley Thompson, Toronto, Can., Wm. Diddel, Ormond Beach, Fla., Wm. P. Bell, Pasadena, Calif., and Robert Trent Jones, New York. The two other members attending, J. B. McGovern, Wynnewood, Pa., and Robert Bruce Harris, Chicago, were absent when photo was taken.

Problems in Turf Production as I See Them." He said the immediate problem is to provide good usable turf at all times regardless of conditions, stating that there was a greater opportunity for development in the South where so little attention has been paid to turf development. The long-time problems resolve themselves into changing practices so that the end result will be better turf for every purpose. This includes new grasses, new methods of fertilizing, mowing procedure, watering procedure, and other details. He went into detail on winter greens in the South.

He stressed the uniformity of playing conditions, encouraging the use of better bermuda strains which will produce putting surfaces that are identical with bent putting surfaces. This is a goal of the Green Section. He said further that there is no reason why bent grasses cannot be used in a large part of Tennessee for putting greens. He said also that *Poa annua*, if seed were available, would be an excellent substitute for rye grass for winter greens.

One of the significant statements was that Byron Nelson cited the closely mowed bentgrass fairways at Canterbury as the best he had ever played on. He did not know they were bent. At Memphis during the Amateur he said that their fairways were better than Canterbury's. They were bermuda grass heavily fertilized, treated with arsenicals for weed control, and closely mowed, with a minimum of

aerification and a minimum of irrigation. He favors the association of cool-season and warm-season grasses throughout a wide belt in the central part of the country.

Conference visitors inspected the beginnings of the turf research program at the University of Tennessee, where a number of grasses have been seeded in 10-foot strips. A number of suggestions were made and the USGA Green section plans to furnish grasses and seeds to the University of Tennessee in a cooperative way on an informal basis.

Richard P. Lord, Agronomist of CAA, Atlanta, Ga., spoke on "Problems in Airport Turfing in the South." He stressed the necessity for load-bearing capacity of the soil and said that pavement and grass are identical in the respect that they tend to hold the soil in place and neither is intended to carry the loads and that neither is any better than the soil on which they are placed. Because of the tremendously reduced cost in providing a grass wearing surface rather than a pavement, there is considerable activity in the direction of studying the problems involved in providing turfed runways for the heavier types of planes. Better measurements are needed in order to achieve the goal. He stressed the closest similarity in the physical soil studies currently being conducted by the Green Section, by CAA and by other soil engineers.

Nitrogen presents the basic problem for all turf throughout the South. Phosphorus is the second consideration. Potash pre-

sents no problem because to date no response has been obtained on bermuda grass with this element. Calcium is essential not only for its effect on the growth of grass but in its effect on flocculation of clay, which makes it more stable. In one case 269 tons of ground limestone to the acre produced no symptoms of minor element deficiencies but greatly improved the physical soil structure.

Discuss Mowing Costs

Henry Westall, Worthington Mower Co., Asheville, N. C., spoke on mowing and mowing machinery in turf production. He cited some historical developments and brought us up to the present day. A demand for mowing equipment that is out in front of the tractor and which cuts the grass before the tractor wheels mash it down was evident.

A number of questions arose on the cost of mowing and care of grass under different conditions. The answers were not very satisfactory but he cited one cost of 5c an acre for mowing airport turf

with a large outfit. He stated that the cost is reduced as the number of units is increased. The problem of how to mow dallis grass was raised and again there was not a very satisfactory answer. This grass produces seedheads many of which escape all modern mowing equipment.

A. V. Tribble, Cherokee CC, Knoxville, Tenn., spoke on "Turf Problems as I Have Found Them at Cherokee." He was faced with three basic questions:

1. Can you grow bent grass greens at Cherokee? The answer was, "I cannot tell until I have surveyed all of the conditions involved."
2. Getting the history of the course and records of what had been done proved to be extremely difficult, emphasizing the need for keeping better records that are available at all times.
3. Soil analyses of turf areas reveal some startling cases. The chief one was an excess of clay and silt and the almost complete absence of drainage in the soil. Eleven greens are bermuda grass

1949 CALENDAR OF EVENTS

FEBRUARY

- 3-6—Tucson (Ariz.) Open Inv., El Rio G & CC
 10-13—Texas Open Inv., Brackenridge Park GC & Ft. Sam Houston GC, San Antonio, Tex.
 17-20—Houston (Tex.) Open Inv., Pine Forest CC
 24-27—Rio Grande Valley Open Inv., Harlingen (Tex.) Municipal GC.

MARCH

- 3-6—St. Petersburg (Fla.) Open Inv., Lakewood CC.
 10-13—Miami (Fla.) Four-Ball Inv., Miami Springs CC.
 14—La Gorce CC, Pro-Am. Inv., Miami, Fla.
 15-16—Seminole CC Pro-Am., Inv., Palm Beach, Fla.
 18-21—Jacksonville (Fla.) Open Inv., Municipal GC.
 31-Apr. 3—Greater Greensboro (N. C.) Open Inv., Starmount Forest CC.

APRIL

- 10—Masters', Augusta (Ga.) National GC.

MAY

- 12-15—Goodall Round Robin, Wykagyl CC, New Rochelle, N. Y.
 25-31—National P. G. A., Hermitage CC, Richmond, Va.
 23-28—British Amateur, Portmarnock, Ireland.

JUNE

- 4-8—British Open, Deal.
 9-11—U. S. Open, Medinah, CC, Chicago dist.

- 14-17—Western G. A. Junior, Univ. of Mich., Ann Arbor.
 16-19—Western Open, Kellar GC, St. Paul, Minn.
 20-25—Women's Western G. A. Inv. Open, Oklahoma G&CC, Oklahoma City.
 27-July 2—NCAA Championship, Univ. of Iowa, Ames.

JULY

- 11-16—U. S. Public Links, El Rancho GC, Los Angeles.
 27-30—USGA Junior, Congressional CC, Washington, D. C.

AUGUST

- 1-6—Women's Western Junior, Onwentsia CC, Lake Forest, Ill.
 2-4—Hearst National Junior.
 2-7—U.S.J.C.C. Natl. Junior Amateur, Houston, CC.
 8-14—All American, Tam O'Shanter CC, Chicago dist.
 16-18—Western Junior, Univ. of Mich., Ann Arbor.
 19-20—Walker Cup Match, Winged Foot, Mamaroneck, N. Y.
 22-27—Women's Western Amateur.
 29-Sep. 3—U.S.G.A. Amateur Golf Championship, Oak Hill CC, Pittsford, N. Y.

SEPTEMBER

- 12-17—U. S. Women's, Merion CC, Ardmore, Pa.
 16-17—Ryder Cup Matches, Ganton, Eng.
 19-25—Western G. A. Amateur, Bellerive CC, St. Louis.

and seven contain bent, three of which are solid bent. The plan is to convert all of the greens to bent grass. The problem then arises as to how to keep the bermuda grass out of the bent grass greens. Discussion then centered around the present work being conducted at Oklahoma A & M on this question. On many turf areas he will aerify as often as possible and add sand and peat to relieve the present compacted condition of the soil.

Fred V. Grau conducted the roundtable discussion on turf problems at the end of the meeting.

The main discussions that arose centered around the production of bent grass greens and how to approach the problem of providing uniform putting conditions and putting speed on both bermuda grass and bent grass greens.

Lester Hall from Savannah and James Hamner from Memphis gave their views on this and approached the subject from two different angles. Lester Hall is converting his greens to a fine strain of bermuda grass which can be cut at 3/16-inch, as bent grass is cut, and provides a fast putting surface. Hamner using ordinary cotton patch bermuda grass feeds his greens in excess of 16 pounds of nitrogen to 1,000 sq. ft. during the growing season, plus some additional nitrogen on his winter rye grass. He cuts his grass at 3/16-inch also and has provided putting surfaces as good as bent grass. Testimony of the players during the USGA Amateur in June, 1948, is good evidence of this statement.

The annual dinner and the meeting of the Southern Turf Association were held at the Andrew Johnson Hotel in the evening. Noer had to leave so Grau showed Noer's slides and his own which covered Noer's western trip and also included a great deal of the current work of the Green Section.

Marshall Crichton Wins PGA Seniors Championship

The grand old men of professional golf—old only in the sense that they have passed the half-century mark and are qualified for membership as a PGA Senior—had their day at the PGA GC in Dunedin, Fla., January 14-16 when 67 members engaged in their annual 36-hole medal play championship.

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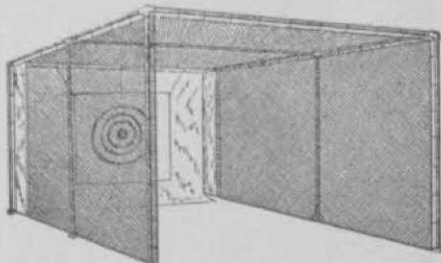
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