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How An Advisory Staff Works As A Testing Laboratory

By **MIKE BEHRENDT**

Supt., Golf Club Department, Wilson Sporting Goods Co.

AROUND this time of the year manufacturers' salesmen get their first views of the clubs that will be in the 1956 lines. Then, a few weeks later the new clubs will be presented for the inspection of the club professionals whose approval of the lines and orders is the expert O.K. of a long, expensive and thoroughly careful program of development.

The program, as we see it, almost invariably starts with the home club professionals. Their intimate experience with the problems of teaching and supplying clubs to improve the games of their customers yields observations and ideas that our salesmen eagerly receive and pass along to the factory.

Then we at the factory take the next steps in weighing the suggestions. In that procedure our professional advisory staff (of stars) practically becomes the expert field testing force of the club professionals.

The advisory staff players are specialists whose earning power depends to a great extent on their equipment.

There are big differences in aptitude, physique and opportunities for practice and play between the advisory staff members and the great multitude of men and women golfers whose satisfied buying keeps the makers of good clubs and the pros who sell those clubs prospering and progressing. But the stars and the other golfers are alike in one respect:

They all want clubs and balls that make it easier to play good golf.

And at that point the advisory staff becomes our experimental laboratory.

Stars Differ As Do Members

The variations in the physical and temperamental make-ups of the playing stars are about as broad on their high playing level as the differences between the types of members the club pro serves. When we can get club design and construction, or ball construction and performance that please the exacting experts we know we've got something to help the club pro and his equipment buyers.

Some of the club professionals' custom-

ers are primarily responsive to the sales appeal of a club that simply feels good. They can't define the sensation of playing with a club that feels so well they have confidence in every shot they play with that club. And we know that Sam Snead who has an acute sense of feel can't describe exactly the feeling of handling and playing with a club that feels exactly right to him, or a ball that feels perfect when he hits it. But his keen feel will discover merits—or the need of corrections—in equipment that he is testing.

Sam pays no attention to swingweight. How the club feels is what interests him. And as clubs are sold to and used by humans rather than scales the human element is paramount in the experimental work. The club pro knows that a driver can be 12 oz. and a brassie 14 oz. and have the same or different swingweights. The home club pro also knows that moving the hands an eighth of an inch on the grip will account for a difference of a point in swingweight.

So the home club pro who has long and successful experience in fitting clubs realizes the limitations of mechanics and the necessity of the human element in very important phases of the experimental and testing work done by staff playing experts.

Cary Middlecoff is another with remarkably sensitive feel but along with that quality he has an investigative and analytical nature. He is technically-minded and wants to know the "why" of everything. "Doc" will come into the plant and ask questions of men working on each detail of a club. His professional background in dentistry possibly accounts for his attitude of wanting to know clearly the reason behind the work.

Betsy Rawls, like Middlecoff, is tremendously interested in the technicalities. Babe Zaharias and Patty Berg are more the Snead type in appraising design and construction. Sam, Babe and Patty look at clubs like Ted Williams looks at a baseball bat; as something made by one genius for another genius to use. But, being exceed-

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PRO
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PLAYER

_____ came up with the perfect solution. He let me use his sample set of Glasshaft for 36 holes. I scored 78-78 with a 45 finish on which creek trouble cost me a pair of 8's. But the clubs are great. I hit tee shots 25 yards longer; whammed irons straighter than I ever have. I'm sure _____ will write you that I was the best "assistant salesman" he had at the tournament. **

*Patent Pending

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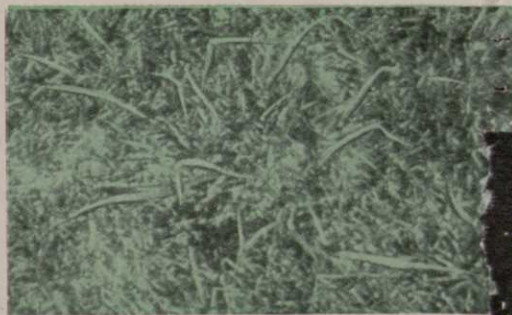
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"Uramite" was applied to fairway turfgrass in early June 1954 at the rate of 15 lbs. per 1,000 sq. ft. The area (right) was fertilized with a conventional soluble fertilizer as a check. In October 1954, the area (left) that had received the "Uramite" showed excellent color, density, and freedom from weed infestation.



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ingly practical people, Sam, Babe and Patty want to know what has to be done to adapt equipment to the use of those who are not geniuses.

Every Golfer's Game Is First

Naturally an advisory staff member is interested in his or her own game first. What golfer isn't? But in discovering what works well for them they are reminded of problems common to most golfers. Gene Sarazen in searching for the answer to his own grip problem found the answer for himself and many more golfers in the "Reminder" grip.

The tournament professional who turns home club pro is a valuable adviser in clubmaking and on golf balls. With bench clubmaking now virtually extinct as training in club fitting, the younger pros substitute their own playing problems and experience as groundwork for fitting clubs to their members.

Club Pros' Viewpoint

Jim Ferrier and Skip Alexander are two who are especially scholarly in this middle spot, and take the home club pros' viewpoint in trying to get clubs to fit the big market. Skip comes into the factory and works around so much as a student and teammate of the clubmakers they've given him a dummy timecard.

Ferrier applies his wealth of experience to trying to figure out what will make good golf easier for his members whose scores now are as important to Jim as his own tournament scores used to be to him. Jim came up with a very helpful idea about the design of the leading edge on pitching clubs that would be effective in sandy soil. He and Dutch Harrison, among the older staff members, figured prominently in getting the shafts of the 7-, 8-, and 9-irons a bit softer and lighter so there'd be more feel in these clubs.

Harrison played a lot of his best golf in the period before he retired as a steady hand on the tournament circuit to become a club pro, and I suspect it was because he went to softer shafts in his clubs. The strongest trend in clubmaking the past few years has been to get shafts to do more work in putting zing into the shot. The strong young bucks, fellows such as Fred Hawkins, Earl Stewart and Skee Riegel, have favored poker-stiff shafts but when they got on club jobs and had to worry about their members' games they began taking an intense interest in shaft research.

Clubhead design fluctuates. The woods have more loft to them than they used to have. The improvement in golf course turf

and the increase in fairway watering are factors that get a lot of consideration. Refinements that promote easier, more effective use of the clubs, make them look better and which will fit into the manufacturing picture and the pros' and manufacturers' inventory requirements are being sought constantly.

The advisory staff, through the study of its individual conditions and explorations among the club professionals who are in the front line of teaching and selling, qualifies itself as a research and testing force. Its value to the manufacturer is based on what the staff can do to help the club pro and those who buy clubs and balls from the club pro.

Jaycees Plan US Tour for Scotch Boys' Team

JERRY Brennan, sports director of the US Junior Chamber of Commerce, is planning the U. S. trip of the Scotch team of six boys who will be in the U. S. from Sept. 20 thru Sept. 28.

Officials of New York Metropolitan, Washington and Chicago District golf associations, the USGA, Life magazine and the National Golf Fund are cooperating enthusiastically with Brennan to show the visiting lads a grand time and return the courtesies generously extended when a U. S. junior team visited Scotland last year.

Matches will be played in New York, Washington and Chicago. George S. May has offered his Tam O'Shanter for the Chicago matches.

Sam Bunton and John Stiratt will escort the Scotch junior team.

The U. S. team will consist of one boy from the Jaycee junior, one from the USGA junior and one from the Western Golf Assn. junior championships and three juniors from each area in which the matches are to be played.

Bonavita Heads Virginia Tidewater Turf Group

Mike Bonavita, Franklin, Va., was elected pres., Virginia Tidewater Turf-grass Assn. at the organization's annual meeting, held at the Little Creek (Va.) Amphibious Base course.

Harry McSloy of Oceana, Va., was named honorary pres. Other officers elected: VP Hurley Savage, Warwick, Va.; Sec.-treas. Wes Barham, Planters' Chemical Co.; and directors Russ Jernigan of Little Creek, John T. Kelley of Norfolk, Fred Sappenfield of Portsmouth and Fred Bingham of Ocean View.

Turfgrass Questions Answered

By FRED V. GRAU

Dr. Grau will welcome questions on course maintenance subjects from superintendents, green chairmen, club and public course officials. There is no charge or obligation attached to this service. Address Queries—Grau, Golfdom, 407 S. Dearborn St., Chicago 5, Ill.

WATER . . . WATER . . . WATER . . . How much is enough—too much—too little? How often—what rate—what method?

The use and misuse of water on turf-grasses makes a fascinating study across the continent. A few studies have been made on the subject and a few articles have been written. For the most part, statements have been cautious and guarded. It would be unfair to appear to criticize anyone who has not yet been taught how to use water properly. There rests upon the shoulders of each of us the responsibility of teaching the lessons of proper water use.

Water and Diseases . . . Nearly 25 years ago I was working with Monteith and Dahl when the now classic experiments were conducted on when to water to reduce diseases on bentgrass putting greens. The answer came out clearly — **EARLY MORNING!**

If this were more generally known and appreciated there would be fewer sprinklers set on greens in the evening and allowed to run until the workmen came in the morning.

It hurts to see an excess of water used on turf in arid climates where water is precious and where control of moisture is a sure bet. Here, if anywhere, it should be possible to use just enough and no more. In climates where torrential downpours may be expected it makes sense to keep the turf slightly underwatered so that, when the anticipated deluge comes, the unavoidable overwatering will not be so severe.

Chlorosis, most frequently ascribed to a deficiency of iron or an excess of phosphorous or calcium, often can be traced to the fact that the moisture relationships have been out of balance in some way. Fortunately, the application of iron restores

grass to a normal healthy color. The true role of water in this disturbance to turf-grasses is worthy of further investigations.

Hand watering is a practice that deserves far more attention. A man with a hose and a rose nozzle can be taught to direct water to the high points on a green and to stop watering when runoff into the low places occurs. A set sprinkler has no brains to apply water only where it is needed. Drowned grass cannot well resist the invasion of *Poa annua* which thrives on ample moisture—which dies when water is denied it.

Water must be applied only as fast as the soil can absorb it without runoff. Mechanical conditioning of the soil will increase the rate of infiltration.

Deep infrequent soaking on established turf is superior to light frequent sprinkling. Every known device to increase root depth should be studied and brought into operation.

Excess surface water will serve to increase crusting and compaction. Rapid penetration of water into the subsurface materially will improve the playability of turfgrass areas. The more rapidly water can infiltrate, the drier the surface can be kept. Dry grass is less subject to disease.

We have sought to encourage the practice of thoroughly and frequently aerifying all banks, collars and approaches, and keeping these areas well-watered. By doing this it has been evident that much less water is needed on the putting surface.

Every golfer should read this next statement:

"WHEN THE GREENS GET HARD THE CORRECT ANSWER IS NOT TO TELL THE SUPERINTENDENT THAT

HE NEEDS TO USE MORE WATER TO 'SOFTEN' THEM."

More good grass has been ruined by too much water poured onto putting greens in a vain attempt to keep them soft enough to hold a poorly-played shot and to mollify a small segment of high-handicap golfers.

Many balls that hit on a hard approach or collar bound high in the air but the green gets the blame. This is another good reason to keep banks, collars and approaches well-watered.

Mechanical conditioning of putting green soils will do more good than water to hold a shot to the green.

It is hoped that a better understanding of the needs for, and the functions of, water can be brought about between the player and the superintendent.

Quite often the demands for a green turf can be met better and more economically by aerifying and fertilizing than by the addition of more water. Water is necessary for life but so is air. We can go for many hours without a drink of water but how long can we stay under water without air?

A balance of water and air, then, greatly is to be desired.

Q—Every time a green is analyzed in our area, the report comes back 'very high phosphorous'. I understand that the same report is more or less national. What effect does a high phosphorous condition have on the greens and what are the symptoms, if any? I also understand that much of the phosphorous is locked up and is not active. (Wis.)

A—Yes, this condition of high phosphorous in greens is more or less a national problem. This is the result of years and years of applying fertilizer high in phosphorous.

Phosphorous is not a soluble material and it remains in the soil with very little leaching. Nitrogen and potash both are soluble and not only do they leach but they are more quickly taken up by the plants and removed in clippings. This situation probably would not exist had we been able to make recommendations more nearly in accord with the needs of the plants.

A high phosphorous content in the soil in a putting green does not necessarily do any harm. If the nitrogen and potash levels are too low in relation to the phosphate level then there is a tendency for more seeds and more coarse stems to be

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produced which affects the putting condition.

Also, a high phosphorous content tends to react with lead arsenate rendering the lead arsenate ineffective against controlling *Poa annua*, chickweed and other weeds in putting greens.

A high phosphorous content may cause chlorosis because it would tend to tie up certain other basic elements which help to maintain green color in grasses. This would be particularly true if the pH of the soil were rather high. This, in effect answers your question about symptoms, if any. Actually, it is rather hard to detect symptoms of high phosphorous content in soils unless there is a striking example of comparison.

It is true that much of the phosphorous is locked up and is not active, because phosphorous tends to associate itself with calcium in the soil and where there is an adequate supply of lime, then the phosphorous is associated with the calcium in various forms.

A tissue test is a good way to keep check on the balance of N, P and K in the leaves of the plants. Many of the elements in the soil are not taken up by the plants in the same proportion in which they exist in the soil. Therefore, a test of the elements that are being absorbed by the leaves of the plant gives a more accurate picture of the situation. Tissue tests in conjunction with soil tests is the best method for evaluating the situation. Tissue test kits are available commercially. Also, the agricultural colleges can assist you with tissue tests.

From the practical standpoint, where the phosphorous content of the soil is extremely high, the best advice is to use nitrogen and potash fertilizers for at least a year without additional phosphorous and then continue your soil and tissue tests to see what changes have been brought about.

Q—Is it possible to use too much water even on bentgrass? I have noticed that on one of our greens where the grass is weak, the grass at the outer edges of the green, scarcely reached by the sprinkler, is much better than the grass that is getting most of the water. (N. Y.)

A—Yes, it is possible to overwater bent. If so much water is applied that the soil is saturated, then there is no room for oxygen, which is vital if the roots are to develop and take up food normally. You can check on the situation by taking a soil sample from the heavily watered

area. If roots are shallow and discolored, it is an indication that overwatering is a factor in causing the poor turf.

You will find it much easier to maintain the right moisture relations in the greens themselves, if you will give more careful attention to watering the collars and banks. These areas should be aerified thoroughly and frequently—about every three weeks. Keeping the area around the greens open and receptive to water will help to prevent excessive drying out of the green even though less water is applied directly to the green. Healthier growing conditions will result, and playing conditions will be better, too, if the putting surface is not so soggy.

Q—We have a fairway with coarse, gravelly soil. Every grass we have tried burns out in summer. What do you suggest? (Conn.)

A—Have you tried Kentucky 31 fescue? Very coarse soils do not retain moisture, but the fescues most often can survive drought conditions. Kentucky 31 must be seeded heavily or it may give a ragged, bunched effect. It should be cut at about 1 in. to give a well-knit turf. Although Kentucky 31 can survive a low level of maintenance, you will find that it responds to feeding. It may not produce a turf comparable to bluegrass or bent but it offers a better chance to grow some grass.

Q—How can we apply two pounds of hydrated lime to 1,000 sq. ft.? (Mo.)

A—By mixing the small amount of hydrated lime with a bucketful of screened topdressing or with a granular organic fertilizer such as Milorganite or similar, or with most any other diluent which will give greater bulk and permit spreading of the dry material.

Q—We seeded Merion bluegrass into our tees. It has been well-watered and fertilized with an inorganic nitrogen. However, we can't find the Merion because *Poa annua* is so prevalent. I know that you and lots of others have recommended Merion for tees, but how do you make it grow? (Mich.)

A—I have always recommended solid sodding of Merion on tees as the best planting method. However, I don't think the Merion would be vigorous under the management you have described, regardless of how it was planted. The fact that *Poa annua* predominates suggests that the