

More on the "Perfect" Course



The fifth green at T. R. Baumgardner's Sea Island (Ga.) course is typical of the beautifully conditioned 18-hole resort layout. Enlarged and remodeled in 1955, the peninsular green was planted to the new 328 Tifgreen strain of Bermuda, an extremely fine-textured and grain-free grass. The water edge of the green is retained by a wood bulkhead which gives a neat appearance and protects the turf from the slight rise and fall of the tide in the salt water lake.

Superintendents Strive To Give Playability Along With Eye Appeal

This is the second of two articles covering the subject of the "perfect" course. The first appeared in the October, 1956, issue of Golfdom (p. 39).

EIGHT supts. who attempted to define the "perfect" course in the first installment of this article almost unanimously agreed that perfection is something that can't be neatly pinpointed as golf layouts go, simply because there aren't any established yardsticks by which to judge perfect conditioning. This doesn't imply any failure among the greenkeeping fraternity for not having decided upon a set of standards by which a course should be rated. Rather, it emphasizes wise restraint on the part of the supts. who, dealing with capricious Mother Nature and equally capricious members as they do, haven't been so bold as to arbitrarily say what constitutes perfect conditioning and then shut the door on the subject.

Meusel's Definition

Old hands in the business, as well as many younger ones, know there are too many variables in turf and traps for that. What's more, no two people, and that even goes for supts., probably would agree on what makes a perfectly conditioned course. Harry Meusel of the Yale course,

New Haven, Conn., may have come closest to striking the right chord when he said a course in perfect condition is one at its individual best. That's an observation worth keeping in mind, one that most supts. undoubtedly will settle for.

Probably the most heartening thing about the first part of the article is that the supts., despite some fretting about budgets, revealed they are doing what they are paid to do — and that is keeping an eye on the golfer. They're not only trying to give him the greatest possible degree of playability in his courses but plenty of eye appeal along with it. As long as this attitude prevails, there won't be much room for criticism from the fellow who swings the clubs.

Five Interesting Versions

In this installment, T. M. Baumgardner, Don Mac Kay, E. L. Queen, G. M. Dearie and John C. Price, top men in their profession, bring up some interesting points that were touched on, but not fully discussed in the previous article. In particular, they deal with the supt's relations with his membership, the role researchers will have to play in bringing the perfect course closer to being a reality, and the contribution architects can make in designing courses

easy to maintain. These, combined with ideas expressed in the first part of this series, are important additions to the knowledge supts. have built up over the years.

Near Perfection His Goal

T. M. Baumgardner, who doubles as vp and supt. of the picture-book *Sea Island* (Ga.) GC believes it is impossible to attain perfection in all departments of a course even for a fleeting moment, but he feels that every supt. should set up standards of near-perfection which he may reasonably hope to attain under ideal conditions. He adds that greenkeeping should be a never ending education in which the supt. constantly observes what changes are going on in the chemistry of turf and soil, and shouldn't be above studying the voluminous writings that cover his field. Here is how he summarizes ideal conditioning from tee through green:

Tees — They should be smooth and level with only minimum slope for good drainage. As for size, tees should be large enough to accommodate peak season play. Multiple tees should be properly spaced so as to provide a fair test for the average golfer as well as the scratch player under varying conditions of wind and weather. Ideal turf is wear-resistant, quick to recover from injury, weed-free, of uniform texture, firm in structure, attractive in appearance and constantly kept at 1/2-in. height. Tee equipment should be simple and kept freshly painted.

Fairways — Baumgardner advocates shaping fairways to suit the intended play of the hole, maintaining that this is a detail requiring careful study and periodic re-checking. He would keep fairways reasonably free of weeds, concentrate on presenting good lies, firm footing and turf that responds to good iron play. Color and appearance are important. One of the *Sea Island* supt's pet peeves is fertilizer streaking.

Traps — In selecting sand, Baumgardner recommends choosing a grade that won't compact in wet weather or blow in dry, windy weather. It should be uniformly loose to a depth of about 4-ins. to provide ideal settings for explosion shots. Good drainage, neat edging and trimming and weed-free maintenance are fundamental, but too often neglected.

Roughs — Ideal rough, if there is such a thing in the estimation of the golfer, varies from section to section, according

to the type and amount of play, and in case of tournament preparation, according to the golfers participating. Important in all cases is to keep it uniform, sufficiently dense and free of clippings and trash.

Greens — Concentrate on getting a true putting surface by striving for dense turf, uniform texture and grass that is free of seed heads, stubble and excessive thatch. Mowing should be daily at 3/16-in. height of cut. Hold quality should be fair, but not excessive, to provide a fair test of golf. Practically as much attention should be given to maintenance of aprons and collars as to the greens themselves.

Plantings — Baumgardner leans to a preponderance of trees in preference to shrubs that may interfere with play. In addition, trees give a more artistic touch if planted in clusters or fairly large masses rather than in formal rows or spotted around the course.

Water Hazards — Be sure they are clearly marked where necessary.

Clubhouse Area — The supt. puts his best foot forward here. It gives him a chance to display his artistry, win members and influence visitors by keeping the entrance, roads, parking areas and lawns neat and well conditioned.

General Factors — This, conceivably, could head the list in the opinion of Baumgardner and his assistant, Marion McKendree. It involves the money and time factors, personality and ability of the supt. as well as his crew and perhaps a hundred other things that are above and beyond soil and turf. Learning how to cope with them is a study in themselves. If anything resembling real perfection is to be ultimately realized on our golf courses, Baumgardner says, a supt. has to be just as careful in nurturing his relationships with the green chairman, club officers and manager, the pro and the men under him as he is in grooming his greens and fairways.

Need Members' Help

Don MacKay, Sr., supt. at *Hartford GC* in West Hartford, Conn., is of the opinion that a perfectly conditioned course can become a reality only when the members are persuaded to help make it so. All of the work of the greenkeeping department can be quickly undone if players are allowed to develop and persist in slovenly habits. This applies not so much to replacing divots and smoothing traps as to the use of containers for discarding rub-

bish. After all, says MacKay, a course can't be considered perfect if it doesn't look perfect.

As for topography, MacKay rules out hills, but feels that a course should be sufficiently undulating to make it interesting. He strives to give each succeeding hole a different character to provide interest and variety in strokes. Probably most important is his conclusion that roughs should be made to swing in and out in order to present challenging problems of shot placements to experts, average players and duffers alike.

Covering the subject of general layout, MacKay feels that both nines in the 18-hole course should balance each other in yardage, interest and quality but the second nine should be the more severe test of golf. Architects, he adds, can make a great contribution to his profession if, in designs of the future, they keep in mind that the machine age has come to the country club and courses should be built to take 100 per cent advantage of the new equipment being used in maintenance work.

Concentrates on Improvements

E. L. Queen, supt. of Crestview CC., Wichita, Ks., has put off his dream of the perfect course for the moment because the rainmakers in his area generated only 10-ins. of precipitation during the first 10 months of 1956.

Like so many supts., Queen wonders if the perfect course isn't something that men in his profession should strive for without ever quite realizing for fear of complacency setting in. To underline this point, Queen says Crestview is continually improving its 18-hole layout and will continue to do as long as he is supt. For instance, in 1956, 300 trees were planted, several tees were plugged with U3 Bermuda, but generally, Queen's task throughout the year resolved into one of holding his own considering the lack of rain.

Looking toward the future, the Wichita supt. says:

"The perfect course is as much in the hands of the experiment stations and manufacturers as those of the supt. and the men who work for him. In the last decade they have done a superlative job of furnishing us the materials and information we need, but I think they can do even more. For example, we need a lot more advice on the things we should not do; on the other hand, there are many times when I would like to have more

specific information on the applications of various fungicides and insecticides, particularly in reference to the most opportune times to use them, but it isn't always available.

"Experience enables a supt. to store up a lot of valuable knowledge in the treatment of turf, but invariably he comes to that turn in the road when he runs out of knowledge and has to depend upon making the right guess. It's at this point that the manufacturers and researchers should be able to step in and help him. Until they can do so with certainty of success, the perfect course is going to remain a dream."

Wants Fundamentally Sound Site

In the estimation of G. M. Dearie, supt. at Edgewater GC, Chicago, Ill., the most expert craftsmanship can't make a course perfect unless it is built on a solid foundation encompassing a suitable site and a good basic soil and drainage system. First things come first in golf as in anything else, Dearie emphasizes, adding that if the groundwork is right, comparatively low maintenance costs will keep a course in A-1 condition for many, many years.

Since opinions vary between professionals and amateurs as to what constitutes perfect playing conditions, Jerry Dearie thinks the supt. has to make a number of compromises that, while they may not be completely acceptable to all golfers, will at least produce enjoyable golf for every type of club swinger. Dearie rarely deviates from this formula:

Greens — Uniform grass and texture; cut 3/16-in.

Tees — Uniform grass and texture; cut at 5/16-in. and kept on dry side to give firm footing.

Fairways — Once again, uniformity; cut not higher than 1/2-in.

Roughs — Cut at least 4-in. high.

Traps — Loose sand to a depth of about 4 or 5-ins.

Looks at Overall Picture

Besides attention to proper grass management and care of traps, roughs and other hazards, John C. Price of Southern Hills CC, Tulsa, Okla., says that the whole course is no better maintained than its more remote corners and out-of-way locations. Price goes on to explain he refers to tool and equipment sheds, the maintenance department's headquarters and similar places.

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to facilitate handling and was seeded into well fertilized plots of ground. Both methods produced grass quicker than on check plots seeded with ordinary seed from the same lot.

Pre-germination of hulled common Bermudagrass seed is justified in any area where day or night temperatures are apt to be below 75 deg. F. Results at the Military Academy on Squad "C" Field mentioned previously support that contention. A good stand of grass was obtained quickly even though weather was cool — too cool for best results with Bermudagrass seed. Anybody interested in testing seeded Bermudagrass for temporary summer cover in the North should use pre-germinated seed.

Moisture Important Factor

For best results with any type seed it is best to mix the seed with two to three times its volume of fine ground Vermiculite, keeping mixture moist for four to five days at a temperature of about 70 deg. F. Then it should be mixed with three to four times its volume of sewage sludge fertilizer or similar material, to dry the mix — just before seeding. Contact of seed with soil is important and can be achieved by seeding with a disc seeder or by light rolling. Surface soil must be continuously damp or moist until the new seedlings become established. The use of pre-germinated seed seems like questionable practice on areas where water is not available. The young grass sprout dries. Then it withers and dies. If attempted in an experimental way on unwatered plots of small size, the pre-germinated seed should be covered lightly, first with soil and then with straw. Evidence up to now is against pre-germination unless water is available to insure rapid growth.

Pre-germination of quick germinating seeds such as the rye grasses and the bents hardly seems justified. Usually seedlings appear within a week's time, or sometimes less. Soaking seed over night is worth trying, but there would be no saving in time with the Vermiculite method. The only advantage might be in a spell of cool weather. Even that would seem like a remote possibility.

Iron chlorosis on greens continued to plague many supts. Those who learned to recognize symptoms and applied a little iron promptly did not lose turf. Others did, and blamed leaf spot or some other disease instead of recognizing the underlying cause. Iron chlorosis is aggravated by high pH, excessive amounts of soil phosphorus and by overwetness associated with high organic content of soil.

The best way to stop iron chlorosis quickly is to rely upon absorption through the leaves. It is the one time where foliar feeding is justified. Fortunately very little iron is needed, otherwise the chemical would burn the foliage due to the necessity of using a small quantity of water — just enough to deposit the iron on the surface of the leaf.

The amount of copperas (ferrous sulphate) need not exceed 2 ozs. per 1,000 sq. ft. The amount of water should be about 5 gals. per 1,000, or approximately 25 to 30 gals. on the average size green. Late afternoon is a good time to spray. Watering-in afterwards will nullify the beneficial effect of the iron.

The new chelated forms of iron stop chlorosis, but lasting effects have been disappointing. In that respect they have been no better than ferrous sulphate on plots in Colorado. Up to now these materials have not performed on grass like they have on citrus in Florida. Until one is developed that will persist, the supt. is forced to rely on foliar feeding with ferrous sulphate. This is much less expensive. In Colorado good results have been obtained with ferrous ammonium sulphate, which is readily available there as a by-product in the recovery of rare earth metals. It contains 7 percent nitrogen in the ammonia form in addition to soluble iron. Burning is more apt to occur with it than with ferrous sulphate. That is the report of several supts. who tried the ferrous ammonium sulphate on fairways. There is very little point in using iron on fairway turf except possibly in semi-arid regions where soil reaction is very high — in the range approaching pH 7.8 to pH 8.0 or above.

A question has been raised about the continuous use of iron. Some think the cumulative effect may be bad. Most soils contain 5 per cent or more of iron, or 100,000 lbs. per acre to the plow depth. The 2-oz. rate is equivalent to 5 lbs. per acre, or about half that amount of actual iron. On that basis harm to grass from the use of iron seems unlikely. The British have used "Lawn Sand" for many years. It is a mixture of ammonium sulphate and ferrous sulphate in dry sand. Some of our fungicides contain iron as ferrous sulphate or as a chelate.

Thatch or mat is still troublesome and on the increase some places. Infrequent mowing, scalping rollers, and less frequent top-dressing are commonly blamed. In the spring of 1956 one club fertilized heavily after good growth had started. Then the green was aerified in four directions. The Verti-cut was used to break up the cores and was followed with a flexible steel mat. Mowing came next and was followed by a light topdressing of about ½ yd. to the green. Recovery was very rapid — in about one week. The green took water better all summer and localized dry spots were not troublesome.

"Perfect" Course

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"One eyesore ruins an otherwise perfect picture," says the Tulsa supt. "And, by the same token, sprinklers that interfere with play, shelters with roofs that are leaky

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and drinking fountains that don't work ruin the otherwise 'perfect disposition' of the golfer. We try to avoid these petty annoyances at Southern Hills because we're blessed with a membership that is aware of the importance of the supt. and his staff in maintaining the kind of course the membership wants."

In many respects, Price is probably a few years ahead of his time. In addition to enthusiastic support from the membership, he has the conscientious backing of his green committee. Much of this accord is attributed to the fact that John occasionally makes informal surveys to determine just what the golfers are thinking, and most of all, what they want. It all goes back to T. R. Baumgardner's earlier remark that a supt's job goes beyond those things pertaining only to soil and turf, an observation that Price apparently fully endorses.

Burke to Defend Seniors' Title at 18th Annual Tournament

Pete Burke, Huntington, N. Y. pro who shot a 54-hole 215 to win the 1956 PGA Seniors championship, will be back to defend his title when the golfing elders gather in Dunedin, Fla., Jan. 21-27, for their 18th annual get-together. The tournament will run from the 25th through the 27th following Senior-Junior Pro-Pro and Senior Four Ball Best Ball tests. The Seniors' annual meeting will be held on the 22nd and the banquet on the following day.

The championship is again being sponsored by William Teacher & Son, Ltd., and the PGA. The Teacher's trophy will be awarded to the Seniors champion while the Alfred Bourne trophy will be awarded to the low scorer for the first 36 holes. The



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age limit for the Bourne trophy has been changed to 55. PGA pros who reach their 50th birthday by Jan. 25 are eligible for the Seniors' championship.