

Turf Roundup of 1952

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"Well, I am glad that's over," said many golf course superintendents concerning the 1952 season. "One of the worst in history," said some. "The worst since 1949," said others. Anyway you look at it, a lot of people lost a lot of turf in 1952. Some of it was good turf lost through errors in management. Much of it was weak, unadapted turf that no one could have saved under the extremes of conditions that occurred in 1952. Some superintendents were criticized unfairly. Some had to have their mistakes pointed out to them. Everyone learned something from his own and the troubles of others. As we had said before, "Every failure has in it the element of success." If we study the failures of various kinds of turf under many kinds of conditions, and particularly under many different types of management, we should come up with a better formula for success than we have had before, even if part of it is only in terms of what NOT to do.

Golfer Appreciation

An event occurred during the playing of the 1952 USGA Open Championship at the Northwood Club, Dallas, Texas, that many players long will remember. At best, player reaction has been a difficult hazard to negotiate. Most of us are to blame for not explaining to the golfer more clearly and more often what it is that helps to make the good turf on which he plays. Let's look at the Northwood instance and see what happened.

Everyone who followed the matches during the Open Championship at Dallas either by radio, television, or on the grounds, will remember very clearly how hot it was. Many players faded in the stretch simply because they could not stand the heat. The Committee, and Herman Borchardt, the greenkeeping superintendent, gave the players good bent greens on which to putt. Bent grass is not a natural grass in Texas, especially for putting greens, but most golf courses are switching to bent because it provides a better putting turf than does the bermuda grass which they used to have. Even so, during hot, dry periods the bent grass, which is relatively shallow-rooted, can't draw enough moisture out of the soil to compensate for that lost through evaporation and transpiration in the dry climate. That is exactly what happened during the Open. Herman had to rinse off the greens in between matches during play! This was an unheard of and unprecedented instance.

Many of the players began to complain bitterly that it would put them at a dis-

advantage and give their opponent an unfair advantage. However, it was explained, (and we shall attempt to explain again here) that the action of putting water on the greens during play in between matches was absolutely necessary in order to keep the grass alive. Had this not been done the grass would have wilted beyond power to recover and the grass would have died. Then, after the Open Championship, the members would have had bare greens instead of grass. Had the watering, which is only a light rinsing or syringing, been delayed even for 20 to 30 minutes the grass would have died. That is how quickly things happen in that climate where we are working with grasses that are not fully adapted.

Water When Needed

Now I am going to relate an instance where water was not applied at the moment it was needed and as a result a championship course lost a good part of its putting greens. I refer to the Big Spring Golf Club at Louisville, Ky. I mention names because the present management gave me permission to cite the instance as a horrible example. The weather during the play of the PGA Championship was anything but favorable to bent grass putting greens. Terrific heat and a drying wind started to wilt the grass. The superintendent wanted to syringe or rinse the greens to stop the wilting and to hold them through the heat of the day so that they could recover at night. However, a definite written order had been issued by the chairman of the green committee that no water was to be applied to the putting greens under any circumstances during the daylight hours when the sun was shining.

The result is well known. The grass wilted beyond its power to recover, and even though copious quantities of water were applied in the evening with the sprinkler after the sun was down the grass could not recover and huge areas were completely dead and bare. This has necessitated a very costly renovation program of reseeding, and the members have been put to a great disadvantage. To water grass when it is needed is probably one of the most important matters in the management of turf.

We hope that players everywhere, when they see the superintendent or the workmen syringing off the greens during the heat of the day, will realize that this is being done because the grass has started to wilt and it needs to be "cooled off" and

given a little water to replace that which is being lost through the leaves so that there will be grass to play on the following day.

Greenkeeping a 24-Hour Job

There are 168 hours in a week; there are 7 days of 24 hours each. The successful superintendent knows what is going on all the time. That is too much to expect of anyone man but that is exactly what many superintendents had to do this past summer. In more than one case where vigilance was relaxed for just a few hours, especially on a Saturday afternoon or a Sunday, the superintendent and the members have suffered.

Almost all golfers take for granted their lovely golf course and the high level of perfection in the turf which they use. If only the golfers could realize the infinite care and the long patient hours which the golf course superintendent devotes to the course for the enjoyment of the members! In far too few cases is that devotion to duty compensated. Many superintendents are leaving their positions and seeking others which offer better possibilities for the future, with less of a strain twenty-four hours a day. The successful business men that make up the management committee of golf clubs know best how to indicate to the superintendent the fact that his services are appreciated and that he personally is held in high esteem by the membership.

Another way of saying thanks to the superintendent is for the club to make sure that his dues in the Golf Course Superintendents Association are paid regularly. An item in the budget for "Education" so that he can attend a couple of turf conferences during the year also will make him feel that his efforts have been worth while. His club benefits in the end as he will come away from these meetings with new ideas. Certainly, every golf course superintendent and every greenkeeper deserves to read the USGA Journal. Quite naturally the club will get a free copy of the Journal with each membership in the USGA.

The Weather

There is little need to dwell further upon the terrific extremes of weather over the United States in 1952. This subject has been discussed quite thoroughly in *Golfdom* by our friend, O. J. Noer. Suffice it to say here that the havoc was due to the unprecedented extremes of temperature, rainfall, drought, insects, diseases and perhaps other factors, including mis-management and unwarranted interference by unauthorized persons. As we have indicated, in some cases loss of turf could not have been prevented. On the other hand, in many cases it was preventable.

More than anything else, the lesson has been pointed up for us and for everyone to read and heed, that the warm-season

grasses, by and large, gave such good account of themselves in 1952 that many more people are beginning to look to them as a partial solution to their summer turf problems in the future.

The principal lesson which the warm-season grasses shows is that we had the turf when it was needed for the majority of the players who like to play during the growing season. One of the outstanding situations is to be found in St. Louis. At the Westwood Country Club for many years the quality of the bent fairways was something that every one admired. The fame of those fairways went far and wide.

During 1952, however, prior to the Western Open Championship, an order was given to lower the mowers during the heat of the summer. The fairway mowers were lowered and as a result the bent grass fairways were scalped, they turned brown, and at the end of the season they were nothing but crabgrass and clover.

Areas of the warm-season grasses (bermuda and zoysia) came through the summer with flying colors and, quite naturally, the management at Westwood today is much more favorably inclined to prosecute a planting program involving bermuda and zoysia rather than try to rely again on bent grass and bluegrass, which failed to give complete satisfaction under all conditions. This situation is much the same at other courses. During the September 29 meeting at the Westwood Country Club the principal topic of conversation was what to plant to produce turf when the golfers wanted it.

An example of what the summer was like might be found in the records of the number of days above 90° which, in Chicago, was 38 days, whereas the normal is less than 10. In Cleveland they had 37 days over 90°, whereas the normal is 5. Undoubtedly the record in many other cities would equal or exceed these.

More Superior Grasses Needed

The general destruction, and, we might say failure of the bluegrasses, bents, and fescues throughout a wide area, indicates that so far as tees and fairways are concerned the problem no longer is as simple as just applying more fertilizer or using adequate quantities of water. When diseases and high temperatures destroy these grasses there is not much left to water or fertilize. It brings us to the subject which we have discussed considerably in the past, and that is that fertilizer is most effective when it is applied on a grass that is able to utilize the fertilizer.

During 1952 we have recommended consistently that the procurement of a supply of fertilizer designed for the fairways be delayed until the fairways could be planted to a grass that could utilize the material. We feel that this procedure is sound ad-

vice and that it will increase in popularity. It is up to the various people who are making local recommendations to determine which grasses shall be planted. It is imperative that everyone who is in a position to make recommendations on courses analyse the situation in view of everything that has happened and make recommendations for the planting of the grasses which have the best possibility of producing the kind of turf that will not let us down, as it did in 1952.

Where warm-season grasses have been planted, especially in the "twilight zone" or the so-called crabgrass belt, there have been far fewer disappointments than where the cool-season grasses consistently have been planted. If we were to consider the number of failures that have occurred in the planting of zoysia, for example, or bermuda for another example, we would find that there was a certain number of failures, but if we were to attempt to determine and to record the number of failures which have occurred from the planting of common bluegrass, ordinary red fescue, redtop, and bent, the job would be an endless one.

Sometimes the management of golf courses loses sight of the fact that for many years they have been pounding seeds

of various kinds into their tees and fairways, only to end up with nothing but crabgrass, clover, knotweed, chickweed and goosegrass. It is a serious responsibility for those of us in research, teaching and extension to make the proper recommendations. It cannot be done in all cases simply because we do not have command of all of the factors which enter into the production of good turf.

Now, more than ever before, golf courses need assistance from those in charge of research and extension to plan their future programs. It is more than ever necessary to plan a long-term program so that every step which is taken will contribute to the prosecution of the planned program rather than to institute temporary palliatives which have little or no place. It is true, as our friend Marshall Farnham has said many times that, "On the golf course it is important to cover up the ground." We recognize that fact and we appreciate that his statement is absolutely true. It is necessary to cover up the ground and to give the golfer a good appearance even if the turf is not all that is expected.

It is unfortunate that in so many cases the research and extension folks are called upon only after it is too late to do any-

GLASS ROOF ADDS TO BEAUTY OF CLUB DINING AREA



This is the dining terrace at Inverness GC, Toledo, Ohio, one of two of the club's favorite rooms to be remodeled recently. For the first time in the history of the club the dining terrace is being used under all weather conditions. A new opalescent blue Alsynite roof, large picture windows, natural redwood woodwork, and fresh green garden with fountain in center have converted the room into a beauty spot in which club officials take great pride. The Fibreglas-reinforced corrugated sheets used on the gable roof are translucent, very light, permanent and shatterproof. The sheets overlap and are made weatherproof by a special adhesive. Base of each sheet is nailed to a sponge rubber strip to keep out the elements.

thing about the present situation. We find ourselves in the position now of lacking planting material and accurate information on some of the grasses which appear to have the greatest possibilities on golf courses.

Nurseries Inadequate

The number of courses which have adequate turf nurseries is pitifully small. Time and again when disaster has struck, people have had to pay high prices for sod, sprigs, or seed to re-establish their turf. Some of the more fortunate ones with vision and the benefit of long-range planning have had adequate sod nurseries so that by plugging, sprigging or sodding the injured areas were quickly repaired and the members scarcely realized that anything had happened. That is good management.

A few golf courses have produced seed of some of the scarce improved turf grasses from their sod nurseries on their golf courses. This has been one of my favorite subjects ever since I went into extension at Penn State in 1935. I recall that in 1936, I believe it was, one 9-hole golf course in Northeastern Pennsylvania combined over \$4,000 worth of fescue seed off the roughs. That went a long way towards meeting their maintenance budget for the following year.

We have learned that it is entirely practicable and feasible to allow certain of the improved turf grasses maintained as close-mowed sod to grow up and make seed. It is not necessary for the superintendent to thresh and process this seed as do the seed growers. It is necessary only that he mow this as hay, cure it properly, and store it in a dry place until it is needed. Then the hay, with the seed in it, can be scattered on the area, chopped up with the mower or disk or an aerator, and he has the benefit of both the seed and the mulch. This is destined to become an increasingly popular practice simply because mulch, in the first place, is highly recommended for new seedings, especially on slopes; and what better way is there to have the seed and the mulch combined in one operation?

This is not a fanciful thing but a practical thing, and actually the time during which the seed is being produced relieves the superintendent of mowing that area. With Merion bluegrass at \$5 and \$6 a pound and with zoysia seed at \$10 or more a pound, considerable advantage could be obtained by producing some of this seed-hay-mulch on the golf course.

Research in Turf

The need for research in Turf Management continues as strong as ever. Last year we cited some of the problems to be solved and noted particularly some of the "toughies" which deserved attention. These problems are receiving attention by the research staffs of the experiment stations

over the country and the USGA Green Section.

It is impossible to do an adequate job in research with insufficient funds and lack of trained personnel. One of the deterring factors in getting trained personnel is the unwillingness of management to pay salaries which will compensate a man for spending the time, effort, and money to receive the kind of training which he needs. It is a sad situation but one which cannot be denied.

The Green Section has suffered from lack of personnel to conduct the work which is so urgently needed among its member clubs. There is little need at the moment to go into a recounting of all of the research problems which need attention because they will receive consideration as the advisory committees of the various experiment stations and turf foundations emphasize their need to the people in research. The most important things will be studied, of course. Many of the other needed studies will have to be deferred until some future time when funds and personnel will be available to conduct the work.

It must be said for the record that the National Coordinated Turf Program is gaining strength year by year. Turf Management continues to occupy a place of greater importance among the agricultural experiment stations of the United States.

A great step forward was taken during August when the subject of Turf Management received such an excellent reception from the delegates of the Sixth International Grassland Congress at State College, Pa. Like the formation of the Turf Section in the American Society of Agronomy and the inception of the Turf Committee of the ASA, the Sixth International Grassland Congress and its recognition of Turf Management has brought to administrative officials all over the world the fact that Turf Management is an important and legitimate phase of agriculture which deserves attention because it is of direct importance to more tax payers than any other agricultural subject.

The turf research program at the University of California officially was accepted as part of the agricultural program in 1952 and from now on it will be supported from the budget. Congratulations to C. C. Simpson and Harold Dawson are very much in order for giving it such a good start on contributed funds. The Golf Course Superintendents in Southern California played a strong part in it, too. Now California is operating as a unit and we can look for big things on the West Coast.

The third Green Section Turf Research Fellowship at Penn State establishes a new high in a continuous program of developing simultaneously a sound body of facts, and in training leaders in Turf Manage-

ment. Dr. John C. Harper, III, working under the second Green Section Turf Research Fellowship, finished his work in June and, to the best of our knowledge, was the only Ph.D. in Turf Management produced in 1952. The new fellow is Miles F. Nelson. We sincerely believe that he will carry on the high ideals set by Jim Watson and Jack Harper. Musser's work with Merion breeder seed, polycross creeping bent, polycross creeping red fescue, and various management practices will be of value to turf people everywhere.

Rhode Island continues to grind out the data for the Northeast. DeFrance has some new bulletins on crabgrass control and weed-free seed beds. Now he is working on Merion bluegrass establishment and management, with a weather eye cocked for combination turf with warm-season perennials (Meyer zoysia, to be exact). The roadway traffic trials will prove to be mighty interesting.

At Tifton, Georgia, there is the greatest array of plots of warm-season grasses anywhere in the country. The latest development is Tifton 127 bermuda for putting greens — a cross between African bermuda and Tifton 57 bermuda. This grass looks and acts in a manner similar to bent grass. Dr. Forbes, now working with Dr. Burton, is continuing his studies with zoysia grasses which look more promising than ever before. Some of Forbes crosses appear to have a great future. Centipede seed has become available as a result of the cooperative work between the Tifton Station and the U. S. Department of Agriculture, and the Green Section. The real way to see the results of the work at Tifton, or at any other Station, is to attend a Turf Field Day.

Rutgers University, under Dr. Ralph Engler's direction, is conducting practical trials of management of bents, fescues, and bluegrasses. Attention is being given to the warm-season grasses in an effort to discover through research, their place in New Jersey's turf areas. The Green Section has furnished U-3 bermuda-grass and Meyer zoysia to the New Jersey Station for the cooperative work.

At Purdue we find studies covering a wide range of subjects, including bents, fescues, bluegrasses, a putting green in use on the campus, warm-season grasses combined with Merion bluegrass, crabgrass control, clover control, fungicide studies, and more. Dr. William Daniel is to be commended for his pioneering spirit and his courage to pursue the new concepts.

We cannot describe the work at each station but we do want to express deep appreciation for the excellent work in soils and irrigation at the University of California; the soils work at Stillwater, Oklahoma; the bermuda selections and bent

studies at Texas A. & M.; the weed and disease control at Ames; the studies of warm-season and cool-season combinations at the University of Kentucky; turf management studies at Michigan State College; and trials of species and strains at Middleburg, Virginia. Encouraging signs are beginning to come from Ohio and North Carolina suggesting that Turf Management is being considered as a part of the agricultural program in those states.

In reviewing the great job of research that men in turf are doing it becomes increasingly clear that, to make that research most valuable, we need (1) coordination on a national basis, and (2) a more effective Extension Service. Too, we need an expanded teaching program. In short, all three phases must go forward together. The big question now is, "Who can best accomplish the job of National Coordination on a continuing basis? When we have the answer to that one our total efforts will be infinitely more effective.

(To be continued in the January, 1953, issue of *Golfdom*)

COURSE PROBLEMS SURVEYED

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determines maximum crop production. As a golf course superintendent I must think along the same line of approach to solving the problem. For instance:

How are we going to feed greens a balanced plant food with the temperature near 90 and a foursome at every green every six minutes?

The answer, in meeting the limitations, was to use soluble fertilizer and spray it on with a power sprayer.

The results: 21 greens fed in 2½ hours by six men, at a total labor cost of \$28.16. The fertilizer cost was \$2.31 per green. There was no burning, no inconvenience to players. By studying weather information we can feed at the right time and actually reduce disease incidence according to our experience this past season when we only had to apply fungicides five times.

In the above operation we had almost \$4000 in machinery. Was it worth while? We have been using the machine for the past six years. We had 50 lbs. pressure at the hose end at every green. Our river water system is nearly 25 years old.

Always the pay-off in course maintenance is results, even though some of the determining factors are beyond the control of the superintendent. To decide what is within your control takes cautiously thoughtful experimentation and confidence in your decision.

I've been through that, too — as many other superintendents have been. After