Test plots of many different types of fairway grasses are shown in this photo taken at the Pennsylvania Agricultural Experiment Station.

FAIRWAYS: Today's Problem

Part 2

By H. B. Musser

SOMETIMES chronically poor turf is allowed to exist, even when we know how to correct it, because of a conflict between playing requirements and method of correction. Or, turf is poor because of any or all of a whole group of accidents, or because of a whole set of conditions that cause chronic sickness. And even when the answers are definitely clear they cannot be applied, or at least have not been applied, because of almost as large a list of reasons as there are causes of the troubles. Add to all this the many instances in which the causes of trouble have not been thoroughly diagnosed and we get a sum that should impress us with the absolute necessity of concentrating on an effort to develop a new deal for fairways.

Actually, the case may not be by any means as hopeless as the foregoing sounds. While it is true that a sudden infestation of insects, weather conditions, or what have you, may quickly undo what has been built up painstakingly over a period of years, it is also true that for many of such things we already know the remedy and can prevent too serious results. A case in point is the way in which courses in the Japanese beetle area have learned to live with this pest. Such experiences demonstrate that when conditions become sufficiently acute to concentrate attention on them a solution is usually found. Further than this, thin turf due to accidents, is, after all, only a passing phase of the problem. Causes are usually recognized and in general prompt steps taken to remedy the condition, if for no other reason, because the damage is so severe that it must be taken care of. And it has actually happened that a fairway has been better eventually, after some accident has happened to it, than before, simply because it got the thought and attention it deserved.

It is really the chronic causes of fairway turf disintegration which constitute the major part of the problem. Obviously, correction and improvement depends upon not only an ability to recognize the trouble when it appears, but a knowledge of how best to eliminate it. And of course the latter involves the ability to persuade those who shape course policies and must O.K. course budgets that the trouble is serious.

After this is accomplished and the right procedure agreed upon, then it is just a matter of patience until the treatment has had a chance to take effect. Chronically thin fairways did not get that way in a week, a month or even a year and they can not be made right again overnight. It is a case of not only finding the right answers, but of staying with the program

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until it has had a chance to be effective. Time is the great healer only when it has the right ointment and the chance to keep using it.

Some Problems Far from Solved

But, what about fairway maintenance and improvement problems for which it is impossible to set up a satisfactory corrective program because we don't know the answers? Here again, the troubles may be either accidental or chronic or a combination of both. The list would have to include such things as disease epidemics, insect infestation, a system of feeding to avoid clover and other weed stimulation, and last, but by no means least, adaptation of both maintenance practices and the type of turf to playing demands. All these are problems that are worthy of the best thought of not only every greenkeeping superintendent but also of every research agency interested in fine turf.

While it is true that a great deal of fundamental work must still be done before satisfactory answers can be found, it is encouraging that at least a start has been made in the direction of adequate solutions to some of these tougher problems. For example, take the case of disease epidemics, particularly of leaf spot of Kentucky bluegrass. This disease probably is much more prevalent and does much more damage to fairways than has been realized in the past. Because of the large areas involved any method of control by fungicides possibly would at best be only a stop gap. And so, it would seem that the best place to look for an answer is the development of resistant or at least highly tolerant types.

That there is hope in this direction is indicated by records on individual plant progenies in the plant breeding nursery at the Pennsylvania Experiment station. In 1937 under epidemic conditions of the disease approximately one-third of a total of 1,600 plants representing 83 separate progeny lines showed at least some degree of tolerance to attacks of the fungus. Additional evidence secured again this year indicates that there may be a real difference in susceptibility of different types of Kentucky bluegrass to the disease. If this is true, certainly it offers hope of materially reducing turf thinning from this cause.

Then take the matter of the control of clover, Poa annua, crab grass and others

of their ilk. While it is true that this is still a very pressing problem on fairways, there are indications that it may not always be thus. We are beginning to learn from practical experience and experiment that feeding programs must be adjusted in such a way that the peak of available plant nutrient supply must come at a time when the good turf grasses will be stimulated more than the undesirable types. Even a slight increase in the vigor of a fairway turf at the psychological moment may materially effect the quantity of clover or crab grass by doing a better job of crowding these pests at a time when they are least able to stand it.

We are beginning to realize that not only quality and quantity, but also time of application of fertilizers must figure in the development of a feeding program. Add to this the information which is gradually accumulating on the control of undesirable grasses and weeds by higher clipping and with chemicals, and we have a picture of the not too far distant solution of the problem of living with these pests.

Other Attack Methods

And there are indications that the clipping problem will be solved, too. As pointed out, clipping is a major problem, not because we do not know what is best for the grass, but because of the conflict between ideal clipping practices and conditions for play. There have been so many cases where attempts to bring these two antagonistic viewpoints together have been successful that it would appear to be the better part of valor to make a serious effort to reach this point. In the light of the very definite proof of the improvement in fairways where higher clipping has been practiced it would seem to be well worth while to keep hammering at the education of the golfing public to longer turf. Where it has been possible to keep club members in line until the virtue of the practice has been demonstrated, as a rule they have been more than satisfied to go along with such a program.

But even if it should develop that it is not practicable to persuade the golfing public to change its mind about clipping heights, there may still be a way out. It may be necessary in the future, if the mountain will not come to Mohammed, to take Mohammed to the mountain. It may be that the answer will be found in revising the entire picture of Kentucky bluegrass, fescue and bent turf to meet the situation. If these grasses are not adapted

to present fairway requirements and if the requirements cannot be changed, then the grasses will have to be changed.

And that immediately raises several pertinent questions. Is it probable or even possible that grasses can be found to replace those commonly used on fairways? Where should we look, and what characteristics specifically should a grass possess to make it worthy of consideration?

Can Answers Be Found?

There are two major directions which a search for such material may take—namely, the possibility of finding entirely new species of grasses that are adapted to fairway use, or of developing new types of the species already in use by controlled breeding. It is encouraging that a good start has already been made on both fronts. A number of individual clubs as well as the Green Section of the USGA and several state experiment stations are trying out such species as zoyzia, timothy, Canada blue, and orchard and perennial rye grass. While this work is still too recent to be of much value as far as results are concerned, at least it does serve to show that the problem is recognized and that thought is being concentrated on it.

And efforts are not confined only to the search for new species. It is quite possible that there may be strains of the species commonly used at present, such as Kentucky blue, which will have just exactly the characteristics that would adapt them to modern fairway requirements. The Green Section in its experimental work at Arlington together with some of the state experiment stations are developing rather ambitious programs of breeding and selection work, aimed at finding such types. For example, at the Pennsylvania experiment station, a nursery of from 3,000 to 4,000 individual plants is maintained each year from which promising types may be selected for testing their possibilities as fairway turf.

While no very definite figures are available because so many selected strains are continually being discarded due to weaknesses which show up early, it is probable that the various agencies interested in the problem have already examined at least 300 or 400 such strains. And it is quite likely that if a canvass were made it would be found that well over 100 of these are being grown at present under critical experimental conditions to check on their possibilities for use as fairway turf.

Of course, all this sifting and testing presupposes a very definite conception of

the requirements for a good fairway grass.

For example, a grass must have the stiffness necessary to support a ball. It must be able to start growth early in the spring so that Poa annua and other weeds do not get the jump on it. And it must be such a vigorous grower that it can successfully compete with weeds such as crab grass that come along later. Then too, the distance it can go into midsummer weather and its drought resistance are important. It must recover quickly from injury and stand up under constant play. And, while not necessities, a rather wide tolerance to soil acidity and fertility conditions would be desirable.

But, above everything else, it must show a high degree of resistance to disease and a very definite ability to prosper under close clipping. Very often it is quite possible to adjust maintenance practices to take care of weaknessess in many of the desirable characters listed, but it would seem to be almost hopeless to solve adequately the disease-clipping problem until types are found that are better able to take care of themselves when subjected to such a combination. While it would be jumping the gun to say that they will be found, there is encouragement in the fact that a conscientious search is being made.

In conclusion, it might be worth while to point out again that this whole problem of satisfactory fairways is relative. They may be good, bad or indifferent, depending on the point of view, and with what they are compared. But certainly it is true that in many cases conditions have already become acute, and it appears that many more fairways will reach that stage in the not too distant future. The troubles can and will be corrected, but let's call a spade a spade, let's admit the gravity of the situation and concentrate our best thinking on it.

Advises Check-Up on Locker-Room Facilities

"LOCATION, size, arrangement, ventilation and lighting equipment of quarters for locker-room men's work rarely is such that the men can do their work with the speed and uniformly excellent results expected in a first class club," says Paul Hendiard, veteran and well known locker-room man.

"Generally the locker-room force is not large enough to handle the rush of work that comes on Saturdays, Sundays and holidays, hence there is a possibility of disorder in locker aisles, delay in drink service, and slowness in shining shoes and packing. The wonder is that so many locker-room men have been able to produce a high standard of service despite the handicaps under which they must work.

"A sudden shower at many of the better clubs where there are not adequate drying facilities, will so upset work that