

the 18TH at Oakmont may settle the "OPEN". . .

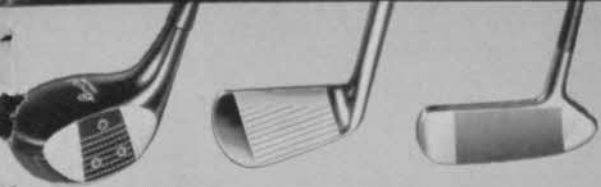
How would you play it?

The most prized title in U. S. Golf, "Open Champion," may be settled this year at the Oakmont Country Club, Oakmont, Pa., on the 18th green — one of the finest finishing holes in the game.

Some famous Pros say this is the best way to play it:

Try to hit a long carrying drive to the right side of the fairway as the contour of the ground gives more roll from this side. Second shot varies from a #2 wood to a #4 iron, played from right to left as green slopes to right into bunkers. Green has a great deal of roll and the speed makes three putting a common occurrence.

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Acti-dione, registered trademark of The Upjohn Co. for its brand of this antibiotic, proved to be an entirely new type of substance, one that fungicide chemists had never considered before! This discovery was hailed widely in magazines and newspapers.

Research workers at Michigan State College at East Lansing took an interest in Acti-dione and tested it widely against many plant diseases. It proved to be very effective against a large number of diseases of turf, such as dollar spot, brown patch, snow mold, and melting-out (*helminthosporium*). It was found that

sterilized by running high-pressure steam through coils around the fermentors. This sterilization is necessary to destroy any undesirable mold which might be present or get into the fermentor and spoil the process. After these preliminaries, a small amount of the mold, producing Acti-dione is placed in the fermentor. As time goes by, the mold grows. And, as it grows, it has the unique power to change some of the sugar and other food in the tank into Acti-dione. After a suitable number of days, the whole process is stopped, and the Acti-dione is removed from the water by chemical means. This whole process is illustrated in the figure.

Acti-dione may serve as an example of how all antibiotics are produced, since the process is essentially the same for any of them.

The question may be asked: "If these antibiotics are so unique, are they very difficult to find?" The answer is yes. Thousands and thousands of molds are examined to find one good antibiotic. The chances of finding a good one are extremely small.

Mesa CC Finances Tree Program

Mesa (Ariz.) CC members are contributing \$10 each, plus labor and equipment, for the transplanting of 100 full grown palm trees onto the course layout.

The club is only three years old and it has too few trees to suit the membership. So it was that when member Leonard Sale volunteered to donate 100 palm trees from one of his properties, his offer was taken up eagerly.

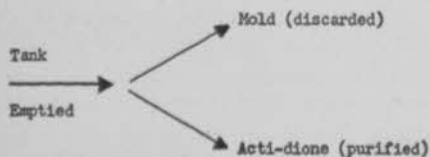
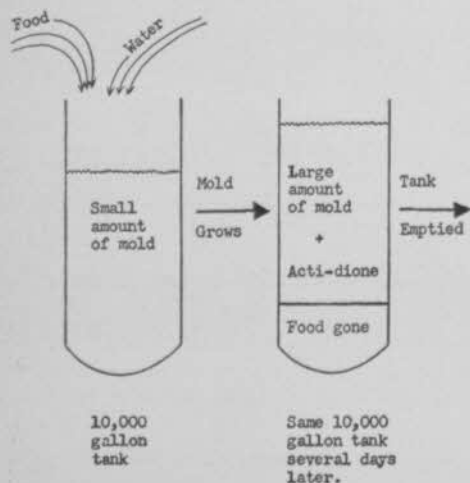
But the lowest estimates on the cost of digging up the trees, transporting them to the course, and replanting them, were well over \$1000. Pro Pete Wansa came up with the answer — a drive for member contributions.

Several members volunteered trucks and other equipment, and offered to assist in the work. Those offers cut the cost to about \$10 per tree, and members were asked to give enough for one or more trees, which would then be known as "theirs."

All 100 of the trees are expected to be transplanted by the start of the summer season. And each will be labeled with the name of the donor.

As an added touch, the club will allow donors to move their erring balls from behind their own trees for a period of one year after the trees are planted.

Fig. 1



one-third ounce of this potent substance would control melting-out on 15,000 sq. ft. of turf. It was found that if Acti-dione is mixed with iron sulfate, its potency is increased even more, and this combination even makes the grass greener!

Acti-dione, like many other antibiotics, is produced by a mold and here, in brief, are the steps used in its production:

First, the mold has to be grown. This is done in large steel tanks called fermentors, which hold about 10,000 gal. of water. Into this water is placed the food that the mold needs to grow. Then the whole tank, food, water and all, are

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Wingate's Shop Looks "Homey"

ROLAND WINGATE'S shop at Ft. Myers (Fla.) CC, shown above and on the opposite page, is one of those shops that has golfers wanting to drop in and visit or to buy a few golf balls. Before they leave they've seen something else they need and they go out happy with a useful purchase that they hadn't planned to make. This is one of the pleasant jobs of first-class selling at a golf club; get them to buy instead of having to sell them... merchandise is out in the open where it can be examined closely. What assures the selling charm of the place is perfect neatness and brightness.

Informed Chairmen Main Hope of Superintendents

By ALBERT ALLEN
Supt., Kernwood Country Club
Salem, Mass.

"Which is the most important problem that faces golf course maintenance?" That is a simple question and I wish I could answer it that simply but there are many problems that confront the present day golf course superintendent.

Starting from the top down there are the club officials to whom you are directly answerable. Some are in office only one or two years and just when they are beginning to understand some of the problems that confront you, another election comes up and your headaches start again. Clubs would be much better off to get a good man in office and leave him alone for awhile.

We have a system at Kernwood that I think is part of the answer. The chairman of the Green Committee has men on his committee who are familiar with conditions and when the chairman steps down one of the committee is in line for his job. That way you get somebody who is not green to the job and relations between the chairman and superintendent are much more harmonious.

Next in order is the superintendents' salaries. Superintendents as a whole are not paid a salary commensurate with their abilities and the responsibilities that their positions call for.

Too often superintendents are directly responsible for a plant that is worth up to a million dollars and are getting laborer's pay. Something is wrong somewhere.

Then comes the wages of the ground



It just fits Fort Myers, a delightful little town on southern part of Florida's west coast. The place doesn't have a store or shop look; it looks like a place that's *ing* shop. The caddy shortage is acute there. The cart storage problem is fairly well solved by plenty of space in the middle of the rack room.

The pro shop is away from the clubhouse, and right close to the first tee, the putting practice green and a luncheon and 19th hole terrace. When the pro doesn't have much help in the rush hours a roomy layout such as that at the Ft. Myers club solves a lot of problems.

crew. They are not paid enough to induce a good man to do his best or to be interested in greenkeeping as a vocation. Most of them have 8 months work a year and then they have to find another job. As a consequence you have a green crew to break in each year.

More Work — Less Time

Maintenance is a much more complex problem than it used to be. Members are much more demanding than they were 15 to 20 years ago. With increases in rounds of golf up to 600% or more you have much more work to do and less time to do it in, as the players take the course over early in the day to late at night.

Tees have to be enlarged to take care of the increased play, greens require meticulous care, mowing at least 6 times weekly, plus steady fungicide and fertilizer applications. Fairways have to be nearly the condition that greens were in not too many years ago, and so it goes

all down the line; more headaches and less thanks, and it's no wonder that many superintendents are seriously considering some job less nerve wracking, especially after a year like 1952 which in New England was the worst in golf course maintenance history.

Sales of clubs taken as trade-ins can be handled in a way that makes very good public relations for the profession. Caddies who get first choice of the trade-ins are lads who are interested in golf and who'll keep regularly at work at the club.

If there are municipal employees (firemen, police, mailmen, et al) they should be given early opportunities to get excellent trade-in buys.

—Carroll T. MacMaster,
Woodholme CC, Pikesville, Md.

Diseases of Turf Grasses and the 1942 Fungicide Trials

By SPENCER H. DAVIS, JR.

As we looked over the past year's reports on turf diseases and attempts to control them with fungicides we come to the realization that the fungi causing the diseases and the fungicides used to control them are of very low intelligence. And I will add, even in the face of anticipated criticism, that in some instances those of us who worked with diseases and fungicides may not display our best judgment. Let's break this down into the three elements involved and look at each one individually.

First, the fungi causing disease are certainly a lowly lot which have no understanding of the world in which they live. **Rhizoctonia**, the organism responsible for brown patch, could perhaps be considered the king of this band of gypsies. And who will disagree but that he came from a long line of bachelors. True, he knows that he prefers hot, humid weather for greatest activity, but then he suddenly appears on a cooler and drier night than one sometimes anticipates. Then too, look at the range of susceptible and non-susceptible turf hosts. Colonial bent may be a favorite host with 100% disease, compared with a 5% outbreak on Seaside bent the same night. But when we examine this 5% we find that it is made up of very large areas measuring perhaps 3 or 4 feet in diameter. Who then can say that Seaside is less susceptible.

Again, take the Dollar Spot disease. We know that it is not too severe on well fertilized greens but **Sclerotinia**, the organism causing this disease, does not know it and will occasionally give an awful outbreak on these well fertilized greens. Not often, true, but on occasion. Merion bluegrass which is not normally a pleasing diet for the **Sclerotinia** organism came down with several bad outbreaks in New Jersey in 1951.

Scatter a few dead leaves from shade trees around a newly seeded turf nursery and see how quickly the organisms which cause damping-off will forget the fact that the nursery is on a well drained soil.

Not a single blade of grass will damp-off except under the cover of a few errant tree leaves.

Look at Fungicides

Secondly, let's look at the fungicides in their state of non-compos mentis. Everyone "knows" that the inorganic mercury compounds are the best controls for snow mold caused by **Typhula**. We "know" that this is due in part to the fact that the liquid phenyl mercury compounds do not stand up under as much rain as do their inorganic mercury cousins. And yet, in 1951 tests conducted by Jack Meiners in Pullman and in Spokane, Washington, the two best treatments of 15 test materials including inorganic mercury were Pura-turf and PMAS—the liquid Phenyl Mercuries.

In the March 1951 issue of the Golf Course Reporter (results of 1949 and 1950 tests) Dr. Engel and I had an article entitled "A New Material Shows Promise for Brown Patch Control." This new material was Orthocide 406 which had shown itself to be equal to the best material for the control of Brown Patch plus enjoying the features of low price plus complete safety on greens in mid-summer even when applied at double strength. Alas, in 1951, while still giving good control it was not at the top of the list. Another instance in which a fungicide could not make up its mind whether it was the best in the field or just very good.

The use of Actidione was discontinued in the Pennsylvania turf tests in 1951 due to its poor showing against Dollar Spot in that state in 1950, and yet the same fungicide responded so well in Michigan tests in 1951 that it was given top rating. Even this new antibiotic fungicide seems to have trouble ascertaining its own value.


We all know too, that $\frac{1}{2}$ plus $\frac{1}{2}$ equals 1 and does not equal 2, 4, or 8. And yet the fungicides are not aware of this. As the result of kindly agitation by Sherwood Moore of the Hollywood Golf Course in New Jersey we finally tried his suggestion of using $\frac{1}{2}$ the recommended rate of both Calo Clor and Tersan in the same tank

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mix with which he claimed good results. The years 1951 and 1952 showed that while these fungicides cannot count, Mr. Moore was right in having faith in them. Let us look at the disease control results on Copper Spot.

Material	Rate	1951	1952
Calo-Clor	1	7	9
Tersan	1	17	36
Calo-Clor + Tersan ...	$\frac{1}{2} + \frac{1}{2}$	1	6

The scientists will explain this as due to several possibilities among them being that of synergistic (or complimentary) action, but I am sure the fungicides do not know the meaning of the word synergism.

We know that there are a number of species of *Helminthosporium* causing melting-out, but since it is so difficult for the pathologists to recognize these different species I doubt that the fungicides can distinguish them apart. And yet we see that Dr. Howard had a complete control of *Helminthosporium* using Puraturf and little control using Tersan in his 1949 tests. While in Georgia in 1951, Dr. Robinson found that his Puraturf did not know that it was supposed to be so much better than Tersan—resulting in little control.

Human Factor

And third, let's examine our human factor and see where some fail in their examination of intelligence.

Many golf course superintendents do not accept the results of the national co-operative turf fungicide trials. Each year a number of states and plant pathologists devote part of their summer to a study of diseases and fungicides. The individual cooperators run statistical analysis on their own results which prove without question which is the best material for each disease. For about the last six years these results have been compiled by a coordinator each year and the results published. Some years several of the states even agree as to which material they think best. And still the golf course superintendent reads the results and does not switch his entire golf course over to the recommended material. He continues to use some material which has proven successful for him through the years.

Some chairmen of greens committees look at the list of prices on various materials which are recommended by the manufacturer to give absolute control of all diseases plus weeds and poison ivy. Depending upon finances of the particular club the decision on the product is then

made. The millionaire club may select the highest priced material and the clubs working on a shoe-string select the cheapest material, regardless of any other factor. And it is quite probable that neither material is the best for that particular club. Along these lines let us picture two adjoining courses on which different fungicides are used. The one uses a good material which is very insoluble and is not affected by rain, whereas the neighboring course uses an equally good fungicide but one which is broken down and becomes useless after a one-inch rainfall. Now in looking into their spray schedule we may find that the schedules are reversed. The one with the stable compounds goes to the unnecessary work of applying it immediately after each rain whereas his colleague (or competitor, however you wish to word it) applies his non-stable material on a regular ten-day schedule regardless of weather.

And so you could follow on indefinitely comparing methods and techniques of various workers and find loop holes in many of them. So let's forget all of this discussion of the non-intelligent disease, fungicides and men and think for a moment on the practical and intelligent approach.

First, if you have a method or compound for combatting a turf disease and it works and you are satisfied with the price—forget about all the advertisements, national results, and newest recommendations. You are the best qualified to determine your own needs.

And in reading over the results of the various cooperators in the National Turf Fungicide Trials, remember that these data came about as a result of several different factors in each case, namely, fungus + cultural conditions + soil conditions + weather + time of application = results. Thus, if any given factor is different on your course, the results may be different. True, if all the states show that one particular compound is rated near the top and another is constantly near the bottom you are foolish to try anything other than the one which gave best results throughout.

Consider Weather

Consider the weather as you apply fungicides. Remember that some have proven to be washed-out quickly while others remain active longer regardless of rainfall.

Think of the price of the fungicide, but

(Continued on page 79)

New Golf Books

APPROACHING AND PUTTING — THE KEY TO A BETTER SCORE. *Published by Thomas Y. Crowell Co., 432 4th ave., New York City 16. Price \$2.95.* This is a "question and answer" book in which Charles B. Cleveland, a very competent interviewer and writer of golf instruction gets the close-up on short game methods of Julius Boros, Betty McKinnon, Loddie Kempa, Harry Todd, John Barnum, Betsy Rawls, Johnny Revolta, Chuck Klein, Skee Riegel, Jack Shields, Ellsworth Vines and Harry Dee.

Wm. B. Langford, noted veteran architect, also contributes to the value of the book in telling how and why the architects present the problems that the golfers must solve in approaching.

Every sort of an approach and putting situation is covered in the material and the way in which Cleveland has put the questions to the experts brings out helpful answers, simply and tersely told. This is a very much worthwhile addition to the library of the golfer, and especially the one who is missing many chances to cut his score because of a sloppy game around the green.

POWER GOLF. *By Ben Hogan. Published by Pocket Books, Inc., 630 5th ave., New York 20, N. Y.* This reprint of the Hogan book originally published by A. S. Barnes Co. should sell immensely in the Pocket Book quarter edition. It is one of the classics. Illustrations are in line drawing instead of photographs and tell the story better than the photographs did.

GOLF FOR SOUTHPAWS. *By Harry Gottlieb. Published by A. A. Wyn, Inc., 23 W. 47th st., New York City 36. Price \$3.95.* Gottlieb, a very successful attorney, started golf more than 25 years ago by taking lessons, reading, studying and practicing six months before he played his first round which was 93. Now he plays from a 7 handicap and dedicates his first golf book to his first grandson. As a left-handed golfer he maintains that poor-fitting clubs, pros' inexperience in teaching left-handers and most left-handers being partly ambidextrous account for there not being many left-handed stars.

Gottlieb makes the interesting and help-

ful experiment of printing action pictures of Jones and Armour in reverse, showing them as left-handers. He clarifies his own book and study of right-handers by left-handers in referring to the hands as the 'front' and 'back' hand, with the "front" hand being that closest to the hole at address.

There are a few points on which experienced pros will disagree with him, especially in his recommendation of a straight left (for left-handers) leg at the top of the backswing, but generally he's provided a very helpful, interesting and sound instruction foundation for the left-handers.

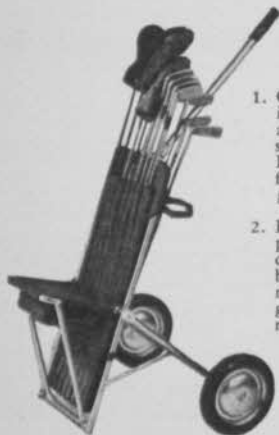
YOUR GUIDE TO A GREENER LAWN. *By Geoffrey S. Cornish. Published by Massachusetts Horticultural Society, Boston, Mass. Price 75 cents.* This book by the widely known turf authority who worked with Prof. Dickinson at Mass. State College, is the most helpful, comprehensive but concise book on home lawns we've ever seen and it's right up to date. It is illustrated in a way that informs and aids the lawn-owner by Cornish's daughter, Carol Burr. It is a book that superintendents can strongly recommend to lawn-owners who come to them for advice and help.

GOLF FORE FUN. *By Bill O'Malley. Published by The Golfer, 3d and El Camino, San Mateo, Calif. Price \$1.* Bill O'Malley, ex-caddie and noted cartoonist who now lives at Carmel, has come through with a book of 76 golf cartoons that are full of belly laughs and expansive grins. O'Malley, who originated the "Two Little Nuns" series, has a great gift of lively line and genius for seeing funny situations in golf. Helen Lengfeld kept pushing him to do the golf book as the publishing profits are to go to the American Women's Volunteer Service.

STOP THAT SLICE! *By Joe Dante and Len Elliott. Published by McGraw-Hill Book Co., Inc., 330 W. 42d st., New York City 36. Price \$2.* Joe Dante, son of the late Jim and a successful, experienced instructor in his own right; Len Elliott, sports editor of the Newark (N. J.) News and co-author with Jim of "The 9 Bad

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"Shots of Golf," have done a job that'll help a lot of golfers and help a lot of pros help a lot of golfers.

The plot basically is keeping the clubhouse square, and the way the authors go about telling how to do it makes it understandable to even the first-year man or woman in golf. Bill Crawford's illustrations are an innovation that will have an influence on golf books in the future. He's really drawn pictures that tell the story of Dante's and Elliott's words in simplest possible clarity.

Much of what Joe and Len have to say in the book is what pros who have had best results in curing slices teach and where these pros and others will find "Stop That Slice!" especially interesting is in how the lessons are given in the book.

...12 LESSONS TO BETTER GOLF.

By Jim Turnesa. Published by Prentice-Hall, Inc., 70 5th Ave., New York 11. Price \$3.95.

Jim of the Seven Turnesa brothers won his first title, the Westchester Caddie championship, in 1929 and the PGA in 1952, and has been learning all along the way. He does a fine job of simplified instruction in this book, on a routine of stressing one point to be studied in each lesson and given special attention in a complete round. Jim starts with the grip, then goes into the stance and in the third lesson takes up the woods, maintaining that "errors will stand out with the full swing of a wood, and they might remain hidden with the briefer swing of a short or medium iron."

In addition to illustrations of his own swing, he uses pictures of Ed Oliver and Dave Douglas to point out characteristics of the swings of players of different builds. Jim also shows some illustrations of common errors in swings and tells how to prevent them. Mark Cox who worked with Jim on the book teamed very well in producing an understandable, concise series of lessons that the average golfer can convert from type into play. The photographs by Ed Feeney are superb. They are sharp and accurately taken from the correct lens position.

Whenever there's an outside tournament to be played at a club the pro should get in touch with officials of the visiting organization as soon as possible. The pro's services in planning and conducting the tournament are invaluable to the officials of the affair, smooth out the tournament operation at the club, and the pro gets in line for sale of a lot of pro shop merchandise as prizes.

—Matt Jans.