The greatest grass saver ever developed for nematode-infested golf greens is new V-C 13 Nemacide. Tests show it kills nematodes in the soil and on the roots. Nematodes are tiny, thread-like worms that attack plant roots and stunt or ruin growth. Fertilizer, water and good care are wasted when nematodes wreck grass roots. Damage shows up as spotty, tufted, yellow, stunted grass with short, sparse roots. V-C 13 Nemacide now offers a new, easy, practical way to destroy costly nematodes.

Tests show one simple treatment with V-C 13 Nemacide provides nematode control and has a powerful, long-lasting, residual effect. Just mix V-C 13 with water, spray or sprinkle it on infested grass, then soak it into the soil with additional water. Use V-C 13 on established grass, use it at half strength on new, young seedings. Get at the roots of your nematode problem — get powerful new V-C 13 Nemacide for greens that will grow grass like never before!

Now available in two handy sizes: 1-gallon jug (10 pounds); 5-gallon drum (50 pounds). Each gallon treats 1600 square feet of grass.
the pros would be leading the movement to speed up the game, as golf is the pros' livelihood.

To be quite realistic about this snail's pace a golfer sets, it's actually costing the pros money. The mathematics of this loss are quite simple: Many courses are often overcrowded. The players are your only customers, and if you could figure out a way to get more players over your course, you would get more sales. In other words, if you could get the average time of a round of golf reduced from four hours to three hours, you would be able to handle 25% more players, and thus 25% more sales—plus bringing back to golf people who have quit because it takes too long to play a round.

This, then, is pretty much my viewpoint as an amateur on professional teaching. I believe that the statements I've made are constructive criticisms of the pro teaching today, and if my suggestions were applied to teaching, not only myself and amateurs like myself, would be benefited, but the pro would increase the enjoyment of his membership many, many times.

Perhaps I've been too critical in some cases, but by no means do I want to be little the job and the progress that professional teaching has made. Actually, golf instruction is much better than the pros themselves generally think it is. Proof of this point is seen in junior golf. Twenty years ago, most of the young golfers were ex-caddies who'd picked up their games without much formal instruction. Now most of the young golfers today have had a fair amount of pro instruction, and scoring in junior tournaments today is much better than when the kids were not pro-trained.

**50% Art — 50% Science**

While I have stressed a scientific approach, golf instruction is probably 50% art and 50% science—or more accurately, it is science applied to an art. It's a difficult job, and I believe the golf pro has the most difficult of all athletic instruction.

The football, basketball, baseball, track, boxing or swimming coach in college or pro sports, gets a kid who is athletically adept and eager. The football coach has assistants who coach blocking, tackling, kicking, end, line and backfield play. The kids are constantly studying under coaches for at least a couple of hours for five days a week. Then, if the kid doesn't work hard and show signs of improvement, the coach drops him from the squad.

And who does the golf pro get? Usually it's a sedentary pupil, muscle-bound or flabby, who either won't or doesn't know how to practice. More often than not, he's a middle-aged guy who usually exaggerates his athletic prowess in his younger days, and now he's pathetically out of condition. He comes to you and takes a half hour lesson. The next day he comes out to the club like a run-away tornado, pre-settles his indigestion with a couple of small drinks, and tosses in too many groceries.

He gets into his gear and makes a hurried call to his secretary to tell her to do something he's forgotten, and then storms out on the course to play a precision game of golf. He stinks! Naturally he blames the pro who gave him his lesson, and he might reverse the usual procedure followed in other sports, and drop the pro from the squad.

I don't blame the player for dropping the pro from the squad, as the predicament of this man whom I have just described to you can be directly traced to the fact that you have not used another scientific method which is in common usage today in business—that is, the technique of "market research".

The horrible example I just described could have been "researched". If he had been, his day's pleasure would have been doubled simply because his pro had taught him perhaps only one thing—Walk slowly to the first tee.

Millions of dollars are spent every year in industry finding out all that can be found out regarding the customer—what are his likes, and what are his dislikes? What are his problems, and what does he want? Have you ever "market researched" your customers—your members?

Do you know what each one of your members wants from the game of golf? Have you tried to figure out how to give him what he wants? Have you helped him in his approaches to the game so that he can get the maximum enjoyment? I am sure that if you "researched" your customers you would find that each of them has somewhat of a different idea of what he wants from golf. You must understand him, and he must understand you.

You, however, must furnish the leadership in achieving this understanding.
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Tufhorse bags are made by the finest craftsmen in the business, with distinctive styling to satisfy the most discriminating golfer.
GOLF course superintendents can be optimistic because they have at their command today a more imposing array of improved grasses, equipment, chemicals, technics and information than ever before experienced.

The intelligent application of the "tools" at his command places the superintendent in a very favorable position to provide greatly improved playing surfaces and thus to command a better relationship with the members and players. Time was when the "greenkeeper" had no readily available source of information when trouble hit. He lived with his problems until he (and Nature) licked them.

Today there is a wealth of good information easily available from several sources including state experiment stations and the extension service which includes the county agents; books, bulletins, turfgrass conference proceedings, journals and magazines; consulting and advisory services and the superintendents' own "self-help" committees. The superintendent, out of the advice and information which he can solicit, has only to make his own decision as to what is best for his conditions.

One of the logical developments has been the recognition of the salesman's place in the turfgrass picture. From obscurity he has become a leading figure in the educational field and has attained membership in the superintendents' organizations. This is as it should be. Because he has been recognized as an equal the salesman is by honor and good business obligated to assist the superintendent in every way possible in addition to supplying needed tools and accurate information as to their best use.

Virtually every golf course is visited several times a year by salesmen who are the manufacturers' representatives. Coverage of this kind cannot be duplicated by any other agency. It is hopeful and encouraging, then, to see these salesmen eagerly attending the educational conferences. Most of them take careful notes in order better to prepare themselves to be most useful to the superintendents, particularly from the standpoint of helping them to understand and to use their products to best advantage.

Q—We are resodding a number of our tees from our Merion sod nursery. In the process we are bringing in some soil and doing some regrading. How much and what kind of fertilizer would you think we should work into the sodbed? (N. Y.)

A—We are great believers in being generous in the use of fertilizer in the sodbed, especially when the sod is Merion bluegrass which requires large amounts of plant food. We would recommend at least 1000 lbs. to the acre of 8-8-8 or 10-10-10 fertilizer.

Where lime is needed and will be beneficial this is the time to incorporate ground limestone at the rate of at least one ton to the acre or more if required. The limestone and the complete fertilizer may be applied simultaneously. By incorporating the lime and fertilizer in the top 2 to 3 inches the newly laid Merion sod will be stimulated into quick rooting and rapid growth which will permit the tee to be used more quickly.

Regular maintenance applications of fertilizer should begin within 4-6 weeks following laying of the sod.

Q—It would seem to us that frequent aerifying of greens would cause them to become uneven. The topdressing soil applied following aerifying would be loose in the holes in comparison with the soil around the cavities. Then rain or irrigation water would pack down the soil in the holes and an uneven surface would result. Would you discuss this? (III.)
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A—By using an aerating machine only once or twice in a season the thinking expressed in the question might have some validity, however slight. The more frequently the machine would be used (within limits) the less valid would be the argument about uneven greens.

Very quickly after aerifying and top-dressing we find new roots beginning to fill the holes, binding and weaving the new soil together like the warp and woof in a rug.

New stem and leaf growth occurs also, stimulated by the aeration and cultivation. The new growth quickly forms a cushion like a woven rug which covers and masks any slight irregularities in the soil.

The soil might be uneven but the creeping grasses tend to minimize this by filling in the low spots with firm growth and by producing a level or smooth uniform surface. Then, by using the "planing action" of vertical mowing equipment, all irregularities are eliminated for smooth accurate roll of the ball. In short, there is good reason to aerify more frequently to minimize uneven soils.

Q—If we change our greens to an improved Bermuda, are they likely to be more difficult or more expensive to maintain? (Va.)

A—I think not. You will have fewer disease problems since the improved grasses are more disease-resistant.

The improved Bermudagrasses actually require less water to live and stay healthy. One of the things we have observed is that good Bermuda greens with deep roots, frequently aerified and adequately fertilized, need not receive water more often than about once or twice a week.

If greens are deeply soaked once a week, it will help to develop the very deep roots which produce that "cushiony" feeling when you play the ball to the green. There is one thing that is absolutely necessary and that is to watch the insects closely and to apply Chlordane whenever there is any insect apparent. Sod webworms and cutworms like the improved Bermudagrasses particularly and have caused severe damage which easily can be confused with disease symptoms.

Q—I planted 4 in. plugs of Bermuda into one of my poa annua tees last spring and now I can hardly find them. I'm rather discouraged with my attempt to produce a Bermuda tee by this method. Do you have any suggestions? (O.)

A—I believe you would be far better off to strip the tee and solid sod it with Bermuda turf from your nursery. I would assume that in order to hold the poa annua through the season you watered rather frequently to keep the Poa from dying. Frequent watering is not good for Bermuda. I doubt also whether you were able to fertilize the Bermuda through the heat of summer as it needed it, as this would not be feasible for holding the poa annua. It is pretty difficult to manage properly for Bermuda when you have to try to hold poa annua.

Q—We are building a new golf course and we have been discussing the use of a mixture of Colonial bent and chewings fescue for greens. Will you please comment? (Wash.)

A—Evidence from many experiment stations clearly indicates that this mixture will produce putting greens that are considerably inferior to those produced from the improved bentgrasses.

At best the chewings fescue is only a nurse crop and most of the permanent turf will develop from the Colonial bent, probably it will be from the creeping strains that are included as impurities. If the greens must be seeded I would greatly prefer Penncross creeping bent seed which will be available in limited quantities in another year. Meanwhile the only logical seed is Seaside.

The new Pennlu creeping bent is one of the better ones where vegetative planting is considered. Pennlu has out-performed Seaside consistently over a period of several years in Pennsylvania.

Q—Our greens have had spots that turn reddish and are almost impossible to wet. Even after prolonged watering or heavy rain the soil in those spots is dust dry. What is your explanation and suggestion? (Ore.)

A—These localized dry spots occur on almost any type of soil, even on sandy soils. They are particularly troublesome where the soil contains an abundance of fine sand, silt or clay particles. They occur also where matted turf prevents the ready movement of water into the soil. Once the soil becomes thoroughly dry, it is difficult to wet.

Most superintendents have found that the regular and frequent use of aerating tools almost completely eliminates the problem. Removal of surface thatch also will help to alleviate the condition. There seems to be no clear and logical explanation of why these spots occur when a few
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March, 1955
inches away the soil takes water normally.

Q—Ours is a sand green course and we have trouble in holding back the growth of grass into the outer edges of the greens. What can you recommend to apply in order that we can keep all vegetation killed? (N. Dak.)

A—On your sand greens you can discourage the unwanted growth of vegetation into the sand by applying sodium arsenite at intervals. This material is inexpensive and can be used with considerable effectiveness.

I would suggest that you purchase the dry sodium arsenite powder, mix it with sand and scatter it along the edges of the sand green where it will stop the growth of vegetation. You could figure on about 2 lbs. of the dry sodium arsenite to a 1000 sq. ft. as an initial application and repeat the dose as often as necessary to accomplish the purpose.

Q—I would like to know all I can about pearlwort and jewelbell—what causes them and how to get rid of them. I have been plugging out most of it but I know removing it is not the right answer if there is a way to stop it from coming in the first place. (Calif.)

A—Plugging is one of the ways to remove these things physically, but the important thing is to insert in its place a plug of the kind of grass that can resist the invasion of these weeds.

Turf experiments the country over have shown that the adapted, vigorous, disease-resistant turfgrasses, especially the creeping bents, are almost essential in order to reduce to a minimum the invasion of all unwanted weeds in the putting greens. Results over a period of years have shown that the Arlington-Congressional combination of creeping bents in California has been superior to Seaside. There are other bents that are coming into the picture including Pennlu, a vegetative strain developed in Pennsylvania.

I would suggest that you investigate starting a nursery of the better creeping bents and continue to plug these weeds and insert in their place plugs of the new grasses.

Weeds come into bent greens when the grass is weakened by some means or other. It may be diseases—it may be insects. The control of all diseases, all insects, is essential to keeping the grass healthy so that weeds cannot invade.

Another possible source of infestation of these weeds is your topdressing.
IT'S ALWAYS FAIR WEATHER WHEN GOLFERS GET TOGETHER?

The City of Miami, Fla., News Bureau gave wide circulation to the photographs of this winter's Miami Open, with the sun shining, the pores open, the birds singing and the gentle zephyrs carressing the sting out of the sunburn. The accompanying photograph of the Los Angeles Open came from United Press. It shows "just ducky" weather when the proettes were playing. That's Marilynn Smith leading the plank-walkers, then scorer Helen Humphrey and Louise Suggs, followed by the gallery enjoying the liquid sunshine.

Need to Train Young Men for Combination Jobs

CHARLES ADAMS, as president of the Iowa PGA, is in a position to see what's ahead in the personnel and operating problems for the smaller town clubs that want high standards. The Sioux City CC pro, an acknowledged practical authority, says that the pro and course supt. team at the majority of clubs in smaller cities of the central U. S. is becoming extinct and to meet the budgets good combination men must be developed.

Adams urged that professionals direct the training of their assistants on broader lines. "The younger men have to learn about teaching and merchandising, about course maintenance and general operating procedure of all departments of the club."

He continues: "By diversifying the young man's study and activity the older professional will train the youth to be qualified for securing a better position later. There is a growing shortage of men who can handle the combination jobs smaller clubs can offer at a pretty good income. These clubs couldn't afford enough to attract two or three capable men for handling the course, pro department and clubhouse.

"With the substantial increase of clubs in small or moderate-sized communities there now aren't enough experienced older pro-supt.-managers to fill the demand for the services of competent combination men."

March, 1955
Far and away the best ball.