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"When the Divil is Nibblin' yer Niblick"

By HUGH M. GORDON

Golf Professional, Roanoke (Va.) Country Club

*"When the Divil is nibblin' yer niblick,
And yer mashie shots muddle amuck,
And yer daffy ole putter
Gies yer ball such a stutter
That it staggers away from the cup;
Hoot mon, gi'e a heed to yer pro shop.
Wi' new baffies and cleeks ye cud go'f!
Dinna' stay such a fogie,
Ye can better the bogie,
And ye'd look like a sportin' ole toff.*

H. and F. GORDON

I have been a golf pro for 30 years. As a boy apprentice, I learned the trade of club making in Scotland. For four years I stood at a bench squinting down the length of a hickory shaft to be sure that I had planed it straight, true and stiff, and worthy of the noble game of golf. Habit is so strong that even now I give every club the eye in the same way I was taught to do it, and so gain the name of "Ole Blinky" by the fresher caddies.

I received four shillings a week the first year I worked at the St. Andrews Golf Co. in Glasgow, and after three years I was so good they paid me eight. I wish I could get a shop man for that nowadays. With my fourth year I was called a journeyman and ready, at its completion, to be an assistant for some more fully qualified worker. After two more years my cautious countrymen were ready to risk me as pro and club maker at some club of my own.

My conscientious family had thought that they were helping me get a training by which I could earn a good living. I was told that really good club makers were scarce, and so there should always be a demand. They are so scarce nowadays that they are practically non-existent, and their demand would be only in a museum for the discarded arts.

For 30 years I have watched the golf pros come and go. Some become has-beens before their time. Drink, sickness, inability to take the gamble of big and little earnings, and the expect-a-miracle-to-make-me-a-champion attitude explain many of the departures from the golf pro ranks. And they are not all down and outers who end their days caddyding while they "remember when" for the entertainment of some modern golf aspirant.

Some find the job of being a golf pro loses its charm after a time and go into other fields of work.

What Makes a Pro

Recently I went to the North and South Championship at Pinehurst to find some die-hard pros like myself among the big group of young contenders for the prize money. They brought to mind the never answered question of what qualifications a man should have to be a golf pro.

A certain champion is described as being able to "eat, sleep, and swing a club—period." Brains make the brawn more lasting in golf. Tests are supposed to show that dumber autoists drive better than the higher IQ boys. They don't get distracted by the worries the latter can boo up out of their brain cells. The same thing may be true in swinging a golf stick, but a big hunk of brawn gets in trouble in the golf pro ranks unless there is something on the ball on top of it to hold it in order.

I talked at Pinehurst with some of these pros who are settling in middle age to a comfortable income on jobs affording mutual satisfactions to club members and themselves. The personality traits they possess and the skills they have to offer are a good criterion for newcomers and for clubs selecting professionals, if the golf pro ranks are to be filled with stable workers who will be a credit to our Professional Golfers Association.

I'd put the five requirements of a good pro as spokes radiating out from a central core of personal integrity, and I'm not sure that any one spoke is more important than any other.

1. Golf teaching skill
2. Merchandising experience
3. Superior game of golf
4. Tournament enthusiasm
5. Greenkeeping knowledge

A golf pro must understand the mechanics of a well grooved swing so thoroughly that the knowledge of it is stuck deep inside his guts. He must always automatically play right whether or not his score is low. He wins major championships if he can, but his swing must go through the same motions as that of the best. Long shots hit with a poor



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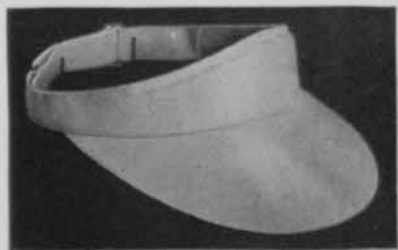
CONGO Model 105 (Left)

Ladies' Sports Hat for all outdoor activities. Smart, cool and feather weight. Crown and brim in natural colored Zelan treated Poplin with trim of yellow, red, pastel shades of green and blue. Small, medium, and large sizes.



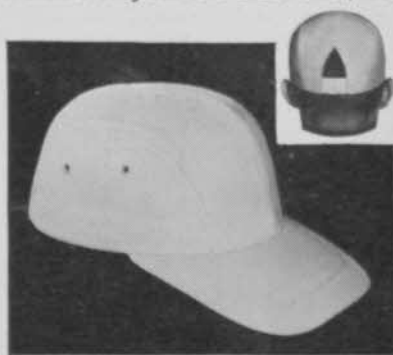
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CONGO Model 437

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CONGO Model 422

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"Why Under The Sun Don't You Wear One?"

swing are never any good for a pro, if they stay good any length of time for anyone else.

Being able to play golf seems to run in families, across the grain rather than down it. That is, there are many families of golfing brothers, I belong to one myself, but there are few father and sons who are pros. That combination of traits of sportsman, small business man, and glad-hander for the club evidently doesn't look so good from the second generation.

Who is Good Teacher?

A teacher is a person who knows some subject so well that he can talk it in simple language, and pull it all apart and answer all the whys that any number of bright pupils can think up. A good golf teacher has watched all the mistakes in the swing some time or other, and has stopped to analyze each of them. That is the reason why a man who plays a great game is not necessarily a great teacher, unless the pupil is young enough to be a good imitator, and all his muscle cells gladly repeat, "Monkey see, monkey do."

To every golfer there is always the lure of other courses. Architects build greens with a particular shot in mind. The size of bunkers, contours, and the opening of the green are planned in relation to it. The golfer picks up this mental image as he views the course, and his fingers itch to get the right club and try his luck with that shot. A pro should be able to see whether each of the holes at his course has that come-hither look to golfers. He is not a golf architect, but he is the greenkeeping expert who can test the golf allure of each hole and say why it fails. And he knows enough about the game his club members play to help them, when they are planning a golfing trip, to find courses offering golf shots most challenging to them.

Keeping at Study

For the last two years I have lost my shop assistants because I have sent them to Amherst, Mass. to take the ten weeks greenkeeping course. A man should offer special skill to any job he makes his life work. Ability to play golf is not enough, and becoming a good teacher or merchandiser is a matter of observation and of applying the experience of others. Nowadays any boy who wants to be a golf pro should study greenkeeping in addition to dreaming of winning the National Championship. I study the notes the boys bring back, because, after 30 years, I can't face pretending to be a school boy again.

When Scotland told me after six years of training that I was now a qualified golf pro and club maker, I came to the United States where golf was new. Through the years I have watched the

word pro come to mean nothing but money in the hand. Don't think for a minute that any man from Scotland will belittle that, but the pro business has wallowed in a mess of uncertainties of aims and qualifications.

In 1919, I met with other young pros at the Copley Square Hotel in Boston to talk over the forming of our Professional Golfers Association. It is a satisfaction to remember that it was formed, not as a squabble over rights or a labor and capital battle, but to improve the standards of training of the pros themselves.

My brother George had preceded me to this country and settled at the Wanne-moisett CC in Providence, R.I., where he has stayed for 38 years. Glenna Collett was a skinny teen-ager there and a friend of my sister Elizabeth. We three Gordon boys had our turns at helping Glenna keep that left arm straight and her eyes on the ball, no matter what ours might be doing. My brother Jack went to Buffalo, N.Y. and I have wandered from the White Mountains to the Blue Ridge.

Anyone who started the game with wood shafted clubs may have used some made by MacDonald Smith, Freddie Martin, Harold Calloway and myself. Freddie Martin is now at White Sulphur and Harold Calloway is at Pinehurst. We four worked winters in New York at club making. We were always broke, always ready for any competitive match, and always sure that golf was the game in this game of life.

I have an old Glasgow newspaper clipping that describes me as the youngest pro in Scotland. Wait long enough and maybe I can shakily produce another one describing me as the oldest pro in the United States. But no, at that time I'll let them write has-been before my name and leave me to enjoy playing the game. I'll let them take their hooks and slices and dirty clubs to some one else.

Northwest Greenkeepers Plan Spring Meet

Greenkeepers Club of the Northwest met Feb. 20 at Seattle, planning the third annual turf conference which will be held at Washington State college, Pullman, March 29-30. Park supt. Brousseau of Spokane and John Harrison of Hayden Lake (Ida.) CC, met with Northwest Pres. Joe Greco, vp Howard Williams and sec.-treas. Glenn Proctor and fellow members in going over the conference program and arranging to have large attendance of greenkeepers and park officials in the Pacific Northwest.

The Northwest members looked around at Seattle courses, got in some play on the Foster course and were guests of Ivan W. Lee, equipment dealer, prior to their business meeting.

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Need and Use of Potash in Turf Development*

By S. D. GRAY

American Potash Institute

Turf on golf greens requires vastly more attention than that on fairways. On greens it is subjected to abuses of one kind or another. First to satisfy the golfer it must be kept trimmed quite short. Constant clipping keeps the plants small in size and in a disproportionate and unnatural ratio with the root system. Furthermore the clippings from greens being removed means a constant drain on the fertility required for their growth. Contrasted with fairway grasses where less frequent and less drastic clipping is the practice, and where the greater abundance of leaves works more efficiently in processing plant food elements for the larger root systems, greens require feeding with properly balanced supplies of fertilizing nutrients. This is a problem of the first importance.

These conditions suggest consideration of the importance of potash in the growing of turf grasses. That it is important for all plant growth is attested by results of scientific research in every country and climate. Turf grasses are plants, therefore they require potash to function as such.

Analytical data from pure grass turf reveals that in 1 ton of dry clippings there are approximately 35 pounds of nitrogen, 8 pounds of phosphoric acid and 25 pounds of potash. In an estimated annual removal of 3500 pounds of dry clippings per acre, there would be 61 pounds of nitrogen, 14 pounds of phosphoric acid, and 43 pounds of potash. Reducing these acre figures to the basis of a 12,000 foot green, the amount of N, P, & K in the clipping would approximate 17 of N, 4 of P_2O_5 , and $12\frac{1}{2}$ of K_2O . These figures are given not as a basis for recommendations but to emphasize the amounts and proportions of these three plant foods removed in the clippings.

Assuming the 3500 pounds per acre of dry turf clippings to be approximately correct, and the amount of potash removed in the clippings to be $12\frac{1}{2}$ pounds per 12,000 square foot green, here we have a logical basis to begin thinking about its importance in turf development. How much is being applied?

The cry may be raised, "who ever heard of potash being needed for greens?" Or

we are told that most soils are rich in potash and therefore get all they need or we have been told that potash brings in clover. Yes, all of these statements have some element of truth. It is true that few have heard potash recommended for greens. Some soils may or do contain abundant potash but do we know how much becomes available to grasses under normal greens management practices? Potash like phosphorus or lime may be expected to benefit the clover. But let us not for one moment forget that grass needs potash too, and since its health, vigor, and ability to withstand disease or make quick recovery following disease are your major problem, it is important that you make sure your potash status is what it should be.

Despite the belief of many that potash is adequately supplied by the average soil, there is abundant evidence to the contrary. In some areas trouble has been experienced in maintaining turf in the period following the spring rains, especially where liberal and frequent applications of sulfate of ammonia had been made. With the coming of summer and hot weather, even with abundant water, the greens tend to go into a slump. Color even with plenty of nitrogen is difficult to maintain. The grass assumes a washed-out appearance and invariably a limp condition—lack of turgor. The explanation for this condition is no great mystery—it is simply faulty nutrition.

An exhaustive study of these conditions on both lawns and golf greens, employing both soil tests and tissue tests has shown a positive correlation with lack of potash even though potash may have been applied at the beginning of the season in the form of fertilizer or as a component of compost. It was found that where ammonium sulfate had been used frequently, as is customary in the case of golf greens, that the potassium was replaced by base exchange reaction and leached out of the soil.

It is well known in laboratory procedure that potassium, which is absorbed by the clay colloids and organic matter, while available to plants is easily and completely removed by an exchange pro-

* (NGSA convention paper)



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cess when the soil is leached with any salt solution. Doesn't it seem a bit strange that no one prior to the research here reported had ever associated the fact that since ammonium sulfate is also a salt, it would remove potash from the soils?

Low Potash Level Corrected

Turf grasses that were turning brown in late July were examined under magnification and typical potash symptoms noted. In these cases (Highland Park CC and Meridian Hill CC, Indianapolis) as much as one pound of ammonium sulfate per 1,000 square feet of turf had been added weekly, so the investigator was advised. One application of two pounds of muriate of potash per 1,000 square feet corrected this condition. The complaint of users of ammonium sulfate of soft, flabby, weak growth on golf greens under heavy nitrogen fertilization may be more truly caused by an unbalance in the nitrogen levels. Putting it bluntly, the difficulty may not be that of too much nitrogen, but most likely one of too low potash level to balance that of the nitrogen.

During the past decade a vast amount of research has been carried on with rapid chemical tests in an effort to establish their values in determining the presence or absence of nutrients in the plant sap. Today, whether called leaf analysis or tissue tests they are accepted techniques and are finding wide usage. Fortunately, as a result of this research we can today use a simplified field test for checking the status of a wide range of plant nutrients in the growing plant tissue.

Test Data Available

Among the tissue test techniques now available for study of the potash status of plant tissue, probably the most extensively used has been the Purdue test kit. For special use on golf greens, an adaptation of this test was made by Dr. G. N. Hoffer in 1945, the details of which were published in *Better Crops with Plant Food* in an article entitled, "Fertilizing Golf Greens." This is available in reprint form and can be obtained by writing the American Potash Institute, Inc., 1155 16th St., N.W., Washington 6, D.C., requesting a copy of Reprint W-4-45.

Of interest and certainly one you might well tinker with in studying potash needs of golf grass, is a test designed by Dr. A. C. Richer of Pennsylvania State College. His article describing the test, like Hoffer's, was published in the same magazine and is available as Reprint B-1-47. The title of the article is—"The Use of Dipicrylamine in Tissue Testing for Potash."

Within the past month another very promising test for potash in plant tissue was brought out by Dr. S. E. Melsted of

the University of Illinois. It is called—"A Simplified Field Test for the Determination of Potassium in Plant Tissue." It appeared in the January 1950 issue of *Better Crops*. Within two months from time of publication, it will be available in reprint form.

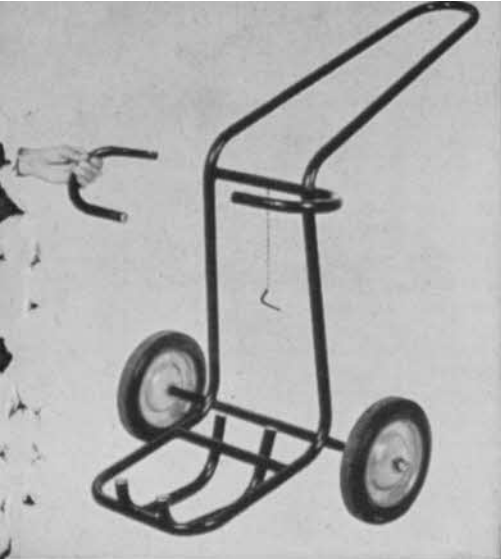
In the opinion of Dr. Hoffer and several other men who have studied the Melsted test and used it in the field it is believed to have great possibilities. It is easily transported and the tests easily and rapidly performed, requiring little special skill. The technique to quote Melsted "is an attempted compromise between quantitative accuracy and ease of operation."

The only equipment required is a small metal carrying case about lunch box size, a good pair of pliers, a dropping bottle, a bottle of .5 normal hydrochloric acid, a small vial, and a supply of test paper that has been prepared in the laboratory by spot treatment with varying concentrations of a special test reagent sensitive to three different levels of potassium in solution. The range of the test as now set up is 1000, 2000, and 3000 ppm in the plant sap. The highest reading indicates an abundance for most crop plants, the lowest a deficiency and the 2000 about right. Somewhere between 2000 and 3000 ppm appears to be the range in which golf grasses appear to be happy and reasonably free from the ordinary run of turf troubles.

How to Make Tests

With the simple equipment above mentioned and the special test papers, all that is necessary to perform the test is to take your sample of freshly cut succulent grass, and with a pair of pliers squeeze onto each test spot enough sap to thoroughly moisten the test area. Allow the sap to react with the test paper for about 30 seconds, then dip the test paper into a vial of approximately .5 normal HCl solution for about 30 seconds. If you prefer, you may use dropping bottle containing .5 normal HCl instead of the vial, provided the spots are thoroughly washed with the dropping bottle solution. The test is positive for any one of the three potassium levels, if the characteristic test paper color for that level persists. Similarly, it is negative if the test paper color for that level turns lemon-yellow. Since the blank or negative readings differ slightly in their depth of yellow, an unused test paper should be dipped into the acid to get a true color of the blank.

It is pointed out and this is important when working with grasses that with any succulent plant high in chlorophyll, the green color of the expressed sap may mask the color of the test. To overcome this difficulty use a wider strip of filter



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paper folded lengthwise. Place the test spots on one half of the paper and when they are used for testing the untreated half is used as a filter to absorb the leaf color as the sap is squeezed through it onto the test spot area.

Of one thing we are certain, the delicate balance between the roots and above ground part of golf grasses calls for the utmost care in fertilization. Precautions must be taken to prevent injury from applied chemicals whatever they may be. To overfeed the grass is as bad as under-feeding it. The real problem is to keep them in a high state of vigor through existing means for periodic checking of the nutrient status of the clippings and to supply whatever nutrient or nutrients the chemical tests indicate. If, for example, a negative test for potash is found, less than 1000 ppm, an application of 1 to 2 pounds of 60 per cent muriate of potash per 1000 square feet should be made as an initial treatment to bring the potash level into proper balance. The total amount of potash required for a green, depending upon its size, should be mixed in about 125 gallons of water, sprayed onto the green under pressure and washed in immediately.

Like animals, turf grasses must be fed if they are to live. They must be fed properly if they are going to be healthy, and certainly they must be healthy if they are to measure up to our expectations. In the light of our present knowledge of the value of chemical tests in determining the nutrient status of crop plants, their more general use in studying the nutrient requirements of turf grasses seems certain. They are the surest means of insuring balanced feeding, our major objective.

SUPERINTENDENTS HOLD

(Continued from page 39)

testing which are available to greenkeepers and which undoubtedly will be widely read.

Prof. Lawrence S. Dickinson, Univ. of Massachusetts, an originator of greenkeeper short courses and pioneer in establishing an educational program that has been a main factor in modern golf development, spoke on Practical Training for Turf Maintenance. Twenty-one years ago at the greenkeepers' convention in Buffalo "Dick" spoke on Education for Greenkeepers which then was considered to be a very delicate subject as the greenkeeper who didn't "know it all" was suspected of making an admission he wasn't qualified to handle his job. More than any other one man Dickinson has been responsible for inspiring and nursing into nation-wide vigor and value an educational program that has transformed the nation's golf courses and made