

results in women's and juniors' club and bag marketing.

But after the survey is made the figures determined must be used in sharp focus and persistently in making sales. Advertising must be especially devoted to these sections of the pro's market instead of the pro's general sales appeal touching lightly on needs of the women and junior players. The women and juniors must be worked strong, then Daddy must get the works too, for he's going to have to pay the bills for these clubs.

Study your market, make figures on it and from a detailed survey you are bound to see plenty of chances for making sales that require special attention.

Fresh Events Create the "Buying Attitude"

By TOM MAHAN

Professional, United Shoe Country Club,
Beverly, Mass.

Every time we think about shop profits for the pro we must follow through in our thinking and realize that unless the member who buys from us gets more value out of his purchase than we get profit out of the sale, it's been a poor sale for the pro.

Value is an intangible factor. You can't put an actual dollar and cents value on a putter that looks and feels so good to the buyer that it is psychologically good for a couple fewer putts than normal. A comfortable and good looking garment for golf or a fine pair of golf shoes that make walking a delight are of greater value to our buyers than our profit on the sales is to us as pros.

Old timers who were bench club-making artists recall their handiwork with which they were reluctant to part for any amount of money. We haven't that same condition existing in pro shop merchandising today but in every properly conducted pro shop business I know of, the pro selects his merchandise with such care that he can be sure he is doing his customer a favor by making the sale.

Accent on Getting 'em to Buy

The pro had to become more of an aggressive merchant during the war years when he couldn't get playing merchandise and had to make a living by switching the members' buying dollars to purchasing whatever the pro shop could supply. Those seasons of scarcity taught professional busi-

ness men plenty about balancing service readiness and selling pressure in the pro shop.

Despite what we learned in the war years about how to discreetly force sales we still see that the most important element in pro shop selling is creating an attitude that makes the golfer want to buy from us.

Naturally the member is more interested in himself than in the pro. So anything the pro can do to tie in the member's perfectly reasonable selfishness with pro shop sales adds to the pro's shop volume.

Club competitions that give everybody a chance to win prizes are the surest stimulus of a buying attitude I've seen in my years as a professional. Often we professionals don't show enough interest in the calendars at our clubs. The same events are held year after year and there are too few names in the prize lists. That's bad for the club and it's bad for the pro. The man or woman who is hopeful of winning some prize, no matter how small, is in the right attitude for buying clubs, balls and bags, etc. and for taking lessons.

Liven Up the Calendar

I'd suggest that every pro who diplomatically can do so, take a very active part in making up the club's schedule of events. He will receive many suggestions for interesting events from the events booklet available at 20c from the National Golf Foundation, 407 S. Dearborn St., Chicago.

We had very good success for the club, the members and the shop in inaugurating a new type of tournament at our club last year. It was the Hi-Lo that we ran every Saturday and Sunday there wasn't some major event on our calendar.

The tournament is played just as we play our New England Metropolitan style pro-amateur. In our club event our better players with handicaps of 5 or under took the place of the pros. It's a great event for getting members acquainted. Generally the better players at a club play in their own class and the medium or poorer players seem to be almost afraid to enjoy the companionship of their more proficient fellow members in a round of golf.

This type of tournament has not only been excellent for the spirit of unity in the club but it's been a good thing for pro shop sales. Every two weeks it's meant directly an added shop volume of about \$200.



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How Soil Structure Helps Putting Green Drainage

By KENNETH WELTON

Putting green drainage is an old subject. It gains attention during wet years and then is forgotten through a cycle of dry years. The most recent wave of interest was touched off with the excessively wet spring of 1947. The more I study putting green drainage the more I am convinced that successful drainage of this kind is more of an art than a science. This is only natural when one considers the great variety of conditions encountered from green to green.

There are external variables such as location, size, slope and grade and internal variables of soil type, including texture and structure, depth of top soil, and sub grade of the fill. If we had drainage data on a particular soil type, even then we would not be much ahead since the structure changes with treatment.

A change in structure can make the soil's reaction to moisture and air percolation greater than between two different soils. For example, I was recently shown a mid-west soil used for cash grain farming. I saw the same soil under different soil-management conditions. In one case it weighed 66 lbs. per cu. ft., in another it weighed 82 lbs. per cu. ft. In the latter case the soil structure had broken down and it was hard and packed. The reduction in pore space was so reduced as to make this significant difference in density. One can readily see that within the same soil an entirely different set of drainage conditions may exist.

There are several other variables I might mention but I believe I have made a point that it is difficult to get exact data for each problem, and that if exact data was available on some of the variables we still could not use it without making allowances for the others.

But let's not complicate this subject. Actually a putting green is a comparatively small area and can be modified without too much cost and confusion. The important thing is to plan for good drainage in a new green and to diagnose the problem accurately for putting-green main-

tenance or before major alterations are undertaken. In other words, there are a variety of angles to putting-green drainage and if all of these are considered one has a good chance of solving the problems as they occur.

The first consideration is that plants are growing under extreme conditions. If the bent grass grew normally, it might grow a foot or more high and then its roots might reach almost that deep into the soil. But the plants are mowed to less than a half an inch in height. Grass cut so close cannot support a very deep root system. Most of the roots are concentrated within four inches of the surface. So, there is a very small reservoir of water. The roots can only come in contact with what water is available in that shallow depth of soil. That means frequent watering at certain times to maintain the supply.

Surface Drainage Important

Surface water must be disposed of, first, because the players will insist on getting on with their game the minute the rain stops and they don't like pools on the greens. But, more important, surface water must be disposed of before it weakens or drowns the plants. The time it takes to injure the plants depends on the conditions. For example, if the green is heavily fertilized and the weather is suitable for heavy growth, the grass will be using reserve nutrients and also oxygen to the limit of its capacity. A sudden shut-off of the oxygen supply might suffocate it in a few hours. On the other hand, grass growing under more natural conditions might survive several days of flooding. The air that the plant takes in through the leaves is not transported to the roots. The roots have to get their oxygen from the soil. There is a tremendous amount of energy used by the roots in pushing through the soil and transporting liquids and fertilizers up into the green part of the plant. A man uses a tremendous amount of oxygen as he works; so do the roots. There must be oxygen at the root zone

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or the plant will suffocate. When water fills the pore spaces in the soil the oxygen is crowded out.

Also, most putting surfaces will be ruined if trampled while soggy. The depressions left by players' heels will remain on some soils and leave a bumpy surface, and this will be especially true if the nap on the turf is kept down, which should be done for best putting conditions. But, since players cannot always be kept off wet greens, the answer to a true putting surface is more dependent



Tile was laid in the sub soil of this new green before the top soil in background was applied.

on proper soil structure and good internal drainage. I will come to that later.

There are also other reasons for adequate surface drainage and one is disease. If there is a saturated condition near the surface, there will be high humidity close to the grass and in hot weather the conditions will be optimum for the growth of fungi and other disease causing organisms. So, water must be removed from the surface quickly. Then, in the winter if the surface soil is saturated and there is a heavy freeze, there will be heaving that will break the fibrous roots. If a warm spell follows and the grass starts growing it will not have the roots to support the growth and it will die. Each green therefore, should be designed so that water will flow off the surface if it can't get down to the sub-soil due to some extreme condition.

Get Good Sub-drainage

Sub-drainage is much more important than surface drainage. I don't want to see any water standing on a green, but with good sub-drainage the chances are

that one will seldom have trouble from surface water. By sub-drainage I mean draining the water through or from the soil. And, the water doesn't have to be drained from the green to a depth of four or five feet, either. In building a golf green the contractor usually uses the material closest at hand for fill. If he uses sand, there will be no drainage problem. Ordinarily the contractor uses the silt or clay soils available from digging the traps, or from some waste area to make the fill for the greens. If this fill ever was of a permeable nature, the permeability will probably be destroyed before the contractor is through with it because it's moved, leveled and rolled with the equipment. The important thing is to finish the fill with sufficient grade that the water which percolates through the open top soil will gradually drain off to the sides of the green along the top of this sub-grade. To get this type of sub-drainage there should be a slope of, say three to four percent, on the surface of the fill although the grade on the putting surface of the green will probably never be more than three percent except at the edges.

There are many comparatively small greens on well designed courses. It's stupid to build a green with eight to ten thousand square feet of surface on a hole that is designed for a short iron approach. On such an approach, accuracy is called for, hence a small green is adequate. On these small greens of, say, five or six thousand square feet in area or less, the chances are little, if any, tile will be needed. The surface and sub-grade drainage should take care of it. But, if the green must be protected from surface water, which is often the case with greens fitted into hillsides, a shallow swail running around back of the green should be provided which will direct the surface water around the green to the side. Also, there will be cases where water seeping from higher elevations comes to the surface. In such cases a trench deep enough to catch this seepage should be dug and tiled. The back fill should be made with cinders or gravel up to a foot of the surface.

Why Tile Drainage

For larger greens with impervious fill, there is little doubt that a system of tile drainage should be provided; but my experience leads me to believe that there's been too much tile slapped in without very much thought of why. There's been more talk about whether you use a her-

ringbone or a gridiron design in laying the tile than there has been on why and where the tile is needed. If you've got a big green with a good sub-grade, the higher portions at the back of the green will be well enough drained without tile. Catch all the isolated low spots and use the majority of the tile on the lower half. Lay the tile to protect the approach from seepage. A soft, soggy approach is bad both for the player and for the turf.

And now, I want to devote some time to soil structure. The whole subject of putting-green drainage is pretty well tied in with soil structure. The structure of the soil refers to the arrangement of the soil particles in relation to the voids or spaces between the particles. In some soils the particles cling together and form odd shaped crumbs or granules. These do not fit tightly and hence there is a correspondingly large area of space for air and also for entry and percolation of water. On the other hand, the particles in some soils do not form crumbs or granules; the particles fit tightly together in a solid mass with a corresponding loss in pore space. These soils are more dense and have higher specific gravity than soils with porous structure. A soil of a friable or porous nature is needed to maintain healthy turf. The structure of the surface soil also has a considerable effect on the playability of the green. A soil that puddles and packs when wet will dry into a solid brick-like mass. A ball pitched to the green bounces and runs as if on a path. It will not hold the green. So the players kick and then the green must be watered to soften it. You can see that between the original lack of pore space

in such a soil, even when dry, plus the super saturated condition it must be kept in to keep it from hardening, the grass has little chance and soon becomes thin and dies.

Right Soil Structure

A soil may be of good structure under natural conditions but when it is spread on the surface of a putting green it is subjected to trampling and its structure may quickly be destroyed by puddling caused by the trampling of players on the green while it is wet. An ideal soil is one that will keep open and porous even under such adverse conditions. Of course, a sandy soil will stand trampling and remain porous because there is little or no clay and silt in it to cement the particles together. But, pure sand will not hold moisture and plant food for long; it dries out too quickly. Our problem is, therefore, to get a loamy soil, one with enough silt and clay, but one which will not puddle and become dense. Organic matter, such as peat, is very porous and will not puddle and cement together. It is like sand in this connection. Add enough peat and sand to a loamy soil to hold the silt and clay particles apart to obtain the best structure.

It is best to test soils before using them as top soil on a green. If a soil when damp may be rolled into a marble which will hold its shape when tossed in the air and caught, or if it can be molded into the form of a worm when rolled between the hands, it is too plastic or putty-like. Add other materials to it to bring it to the correct composition.

Organic matter is effective in break-

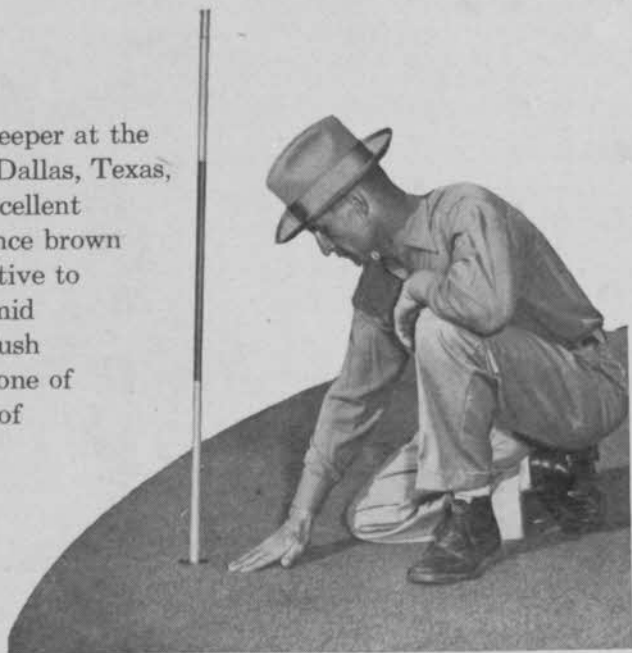
(continued on page 89)



Drainage of traps around this new green (right rear) is being taken care of by tying them into the main tile system.

How **BROOK HOLLOW**

WILLIAM R. BUSH, greenskeeper at the Brook Hollow Golf Club, Dallas, Texas, takes great pride in the excellent condition of his greens. Since brown patch is especially destructive to greens during the hot, humid summers in Dallas, Mr. Bush considers fungous control one of the most important parts of his greens management schedule.



Mr. Bush prevents fungous diseases by spraying his greens regularly with "Tersan"—rather than waiting until the disease has started. "Regular applications of 'Tersan' make the difference between excellent bent grass greens and no greens at all," he says. "We have tried several products on our course, and 'Tersan' has given perfect results."

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"'Tersan' is as essential as water, we think, for the care of fine bent grass greens," says Mr. Bush. "We have never lost a green since we started using 'Tersan.' In fact, it seems to aid the growing quality and deep green color of the grass—as well as to give 100 % control of brown patch."



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April, 1949

Veterans Benefit from Annual Long Island Tournament

By JOHN M. BRENNAN

At the annual meeting of the Long Island Golf Association at the Garden City Hotel, Frank Strafacci handed over to Al (Red) Brosch of Cherry Valley Club, representing the Metropolitan PGA, a



War hero Frank Strafacci, representing the Long Island GA, turns over proceeds of annual Rehabilitation Fund matches (\$3,452.72 check) held at Fresh Meadow CC to Al Brosch, vp of Metropolitan PGA, at annual LIGA meetings at Garden City.

check for \$3,452.72 to be added to the Rehabilitation Fund that now exceeds \$14,000.

"We have enough money now to construct a pitch-and-putt course at St. Albans Naval Hospital and a larger course at Northport Hospital, another Long Island retreat for wounded servicemen," Al Ciuci, president of the LIPGA told the delegates at the LIGA meeting.

The 1948 tournament, sponsored by the LIPGA, the LIGA, and Women's LIGA, was staged over the handsome links of Ciuci's home club, Fresh Meadow, formerly known as Lakeville in Great Neck. Twenty-five of the leading pros, amateurs and feminine players of the district compete on a handicap basis.

Originally started back during the war in 1943 at Cherry Valley, the tournament

was staged to collect balls, bags and clubs for servicemen, but later when it was almost impossible to purchase balls and the war ended, the committees representing the three Long Island associations agreed to continue the matches under a different setup, with the players contributing entry fees and the LIGA sponsoring a Calcutta pool and auction. These have averaged \$12,000, attesting to the enthusiasm and spirit manifest in these worthwhile tournaments, which have become a highlight of the Long Island golfing season.

Dr. Oke V. Wibell, president of the LIGA, was lavish in his praise of the players and spectators who braved inclement weather at Fresh Meadow last August 1st to make the event almost as successful financially as its predecessor at Inwood CC the year before when a committee headed by Joe Feldman realized \$3,831.35.

"There is no reason why associations in other parts of the country can't emulate the Long Island groups," said LIGA Secretary J. Eldridge Scheffmeyer. "We intend holding these events annually to raise money for the heroes at our rehabilitation centers. The tremendous success of the Long Island events is due to much hard work and fine cooperation between the three golfing groups. We are mighty proud of the work done and the boys, I know, appreciate our efforts."

Funds Provide Course and Equipment

The pitch-and-putt course at the Haloran Hospital, Staten Island, in the Metropolitan area, was constructed through funds realized at Seawane Harbor Club in 1946 and at Inwood in 1945. The first two events, held at Cherry Valley in 1943 and 1944, provided the necessary golfing equipment for the boys. Long Islanders by the hundred attended the matches and gave either balls, clubs or bags as the price of admission. Even the players and officials contributed some kind of equipment.

Mrs. J. Barney Balding, wife of the famous polo ace, has been influential in putting over these annual events. The