

A superintendent's challenge

*North Jersey CC (Wayne, N.J.) presents Dick Williams
with a unique problem—a front nine that has a rock-shale base and
a back nine that has a clay base*

by Frank Leber

North Jersey Country Club in Wayne, N.J., lays claim to being one of the few courses in the country where the front nine and back nine are completely different as to the types of base. The front nine (and the greens superintendent, Richard W. Williams, can prove it) has a rock-shale base, with the outcropping producing drainage problems that cannot be relieved by ordinary methods. The back nine has a clay base, and again drainage problems arise, but these are being handled in an ordinary manner.

Chartered in 1895 in Paterson, N.J., North Jersey CC came into the Wayne area in 1922, and the course was opened for play in July, 1923. It was designed and built by the famous Walter J. Travis, who took advantage of the rolling, hilly land to carve 18 scenic holes. While North Jersey is only ten minutes from Paterson and less than

45 minutes from New York City, a visitor to the club is struck by the complete absence of any roads, houses or general city impressions once inside its gates.

A half mile of gently winding road leads to a large French (Normandy) chateau-type clubhouse complete with blue slate roof and high swept gables. Ablaze with color during the season and early fall, it is also a wild life refuge. Deer are prevalent, as are woodchucks, ground hogs, squirrels, chipmunks, skunks, raccoons, snakes, and, occasionally during the late summer, a few bears will wander down from the mountain. Water fowl use the large pond in front of the 18th tee as a home site, and a family of beavers can be found at the reservoir.

From a superintendent's point of view, however, its scenic beauty is a mask to cover its maintenance problems. At the time of its con-

struction, U.S.G.A. specifications as to the building of greens were not as precise as they are today, nor were they universally followed. The greens, small and heavily-contoured, were built over rock bases (mostly), crushed and screened to a degree; but no tile was provided, nor were drainage culverts or run-offs put in. (When one of the original greens was re-built several years ago, they found it to be layers of dirt piled on each other for the base).

Compound this problem by having one nine located on rock shale base and the other nine on a clay base and the superintendent must be blessed with not only a green thumb, but a wealth of experience, the patience of Job, a willingness to experiment, and when necessary, to improvise.

Dick Williams came into these problems five years ago, after at-



tending Deerfield Academy, the University of Massachusetts; and then working on the construction of golf courses for more than seven years.

Dick found that heavy play (the play at the course had increased almost ten fold in the last decade) and several years of unseasonable weather had worked havoc with the course. The original planting on the greens had been South German strain with Kentucky Blue and Fescue on the fairways. The heavy play, and too much water, had brought on a heavy growth of *Poa Annua*. It was impossible to obtain the German strain that was wearing out, so Dick decided to substitute Penncross bent mixed with top dressing on the greens and to bring in Seaside bent for the fairways.

THE FRONT NINE

While the course has a center line watering system, it is all under manual control. To compensate for the rock-shale base on the front nine Dick turned to frequent, light watering to avoid break-outs on outcropping ledges, and to prevent flooding in the low area. To protect the contours of the greens on the front nine, the same hand watering method was adopted.

To bring back the fairways he decided on continual aerifying in the fall months and the addition of 40 lbs. per acre of Seaside bent.

To eliminate the drainage and seepage problem in the low areas he put in stone drains and culverts.

Three of the greens on the front nine were torn out and replaced with Penncross sod. The other six greens were over-seeded, spiked, and top dressed with the Penn-cross bent.

As Dick spoke about his first months at the club, he still looked at the front nine in a distressed fashion. "There is no way, absolutely no way that you can eliminate the problems brought on by the rock-shale outcropping, short of tearing out the whole course and blasting the rock-shale out. We have tried to control the amount of water by hand-watering frequently, rather than for extended periods. But a heavy rain storm can cause damage. The water sinks into the soil rapidly, then races along the outcroppings and ledges looking for a place to break through. If we're lucky it will work its way downhill to a low spot where we have placed several culverts and drains. Here we can control it to a degree.

"If we're not lucky, the water will break through the side of a hill and you suddenly have a small stream down the fairway with all the silt and sand that accompanies it. It's a funny thing, but the amount of the rain makes the difference. A light, gentle rain is great and keeps the course in condition. The water

makes its way underground without any problem at all. But a heavy down-pour, that's trouble! And you can only imagine what's happening. It just goes along the outcroppings, then boom—out she comes. Never the same route twice."

THE BACK NINE

Turning to the problems of the back nine, he listed the clay base as number one and then the grass mixtures as number two.

"With the clay base," he explained, "you have a 'sponging' problem. The water gets through the soil reluctantly and into the clay which sops it up like a sponge. There is no run off, unless of course you have a cloud-burst. In general it is just a continuous sopping operation. This is good, up to a point. Then you get too much of a good thing. Once it gets too soft, you just have to work out the individual holes, each with its own problem."

Two greens on the back nine which were a perennial problem have been completely re-built according to U.S.G.A. specs. They are set on a gravel base, average of two feet, with 14 inches of screened topsoil, followed by sand and humus to a mixture of 60% coarse sand, 20% topsoil and 20% humus. Here again Dick has used Penncross sod. The other seven greens still have the South German bent, which he is replac-

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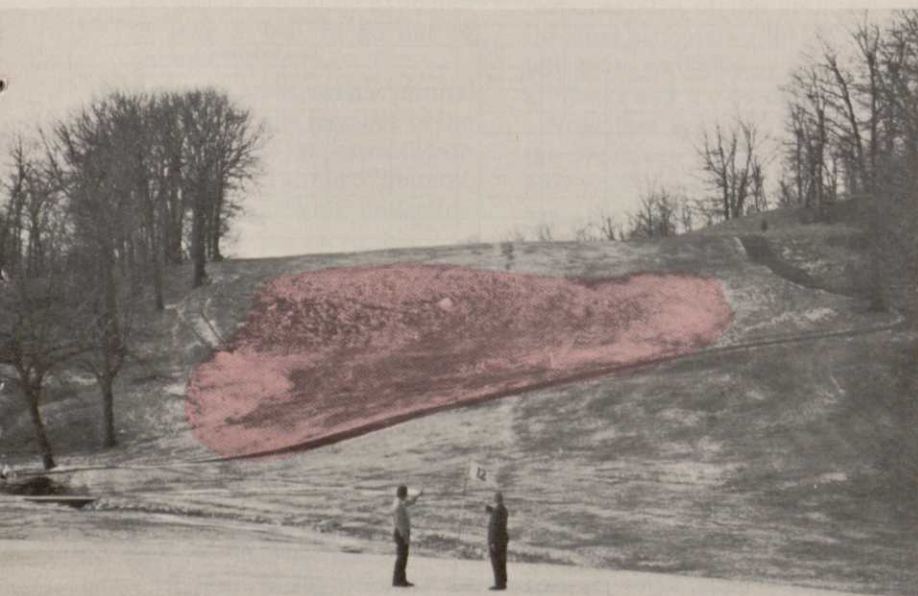


Photo at far left shows view from behind 6th green looking back up the fairway. Though the gently sloping hills look innocuous, the rock-shale base has created many drainage problems. In the center picture, you are looking down from the 14th tee to the green just in front of the pond. The center area, about 80 feet below the tee, provides a natural cup (tinted area) which, with the clay base, holds the runoff water and creates "sponging problems." To solve this, greens superintendent Dick Williams has put in drainage ditches on both sides of the fairway, feeding into pond in background. The fairway part has been sodded over. In photo at right, head pro Ray Ferguson and Dick Williams stand on 12th green, look back up fairway. Area in left center of picture (tinted area) is a trouble spot where breakthroughs can occur during heavy rains.

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ing gradually through overseeding with the Penncross. To overcome the sopping problem he charts more aerification, and the addition of Gypsum to the top dressing. This gives better percolation of water.

In the fairways of the back nine he has worked in stone drains and culverts in the lower areas, putting topsoil over crushed stone, then sodding it over. The original Kentucky Blue and Fescue is being replaced with the Seaside bent; again using the 40 lbs. per acre seeding program. The heavy seeding is done in the fall.

OVERALL MAINTENANCE

On both greens and fairways, front nine and back, he uses a commercial fertilizer every other Monday during the season; "10-64" with 60% organic which is applied with water. Also during the season he uses a commercial spray for fungus and control of crab-grass.

When asked why the switch to Seaside bent rather than the Kentucky Blue and Fescue, he replied, "Hardiness. The Seaside will stand up better to heavier play. Plus the fact that as you cut close you lose the Kentucky and get heavy growth of Poa Annua."

It took almost four years to get the problems into line. However, no problem is ever completely whipped, because as Dick points out, "There is a day-to-day problem in this part of the country where heavy rain or snow can benefit one fairway, but hurt another. You just work handling each hole as a separate course."

As of now he has set a watering schedule that has the greens getting watered daily, all hand-watering. On the front nine the hand watering is necessary to keep them moist and prevent the water from running away. On the back nine he hand waters to keep them moist, but to prevent puddling as the clay base does not accept the moisture as quickly. On the fairways he waters the front nine four times a week with a 1/2-inch of water per watering, and the back nine three times a week with 1/2-inch per session.

For the cutting schedule he tries

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to maintain his fairways at 5/8", using a 7 gang 10 blade hi frequency unit. The aprons are trimmed to 1/2-inch with greens mowers, and the greens are held to 1/4-3/16 inches, depending on the weather. The fairways must be cut three times a week. The greens and aprons are done daily.

The compaction resulting from poor soil structure and heavy play is compensated by bi-monthly spiking and fertilizing. (With the golf season running virtually throughout the year, Dick has had to make some changes for the late fall and winter months). To save the wear and tear on the greens he sets up two holes, with the golfers changing the flag from one hole to another as they reach the green to putt out. The cups are changed two or three times during the winter season. The sites of the cups must be chosen with care to put them in position where the wear on the carpets and greens can be held to a minimum.

NEW PROBLEM

The last two years have introduced a new problem, carts. "Don't misunderstand me," said Dick. "I'm not fighting them. I realize with the caddy shortage they are the coming thing. As a matter of fact they are not coming, they are already here. But they are a problem, particularly on a hilly course. I can't close the course every time it rains, but when the fairways are soft some golfers rut them out completely, particularly going up or down the hills. It has taken us nearly two years to get the paths in, to protect sensitive areas, yet we still have golfers that refuse to use the cart paths. I know that this is a problem to the club, but the results become my problem."

Would all the problems ever be solved? "Nope," said Dick, happily. "A superintendent without a problem is a most unhappy fellow. Naturally we take pleasure in beautifully manicured greens and aprons, and close-trimmed fairways, but unless we had to overcome problems to get them, the club wouldn't need us. So, the more problems, the more we're needed, and the happier we are." □

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