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### Demaret's 65 Breaks Notre Dame Course Record

Jimmy Demaret and Jack Burke knocked off from their pro circuit labors long enough in May to play an exhibition at Notre Dame University GC, with Demaret shooting a 33-32-65 to break a 19-year old course record. The old mark was a 67 authored by Horton Smith. Burke, troubled by the Irish greens, had to settle for a 73. Others who took part in the exhibition and their scores were: Tom Sheehan, former ND golf captain (73); Creighton Miller, All-American Irish halfback in 1943 (71); and two members of this year's ND golf team, Joe Grace and Charlie Thurn, who carded 75 and 74, respectively. In the picture above are (standing, l to r): Rev. George Holderith, CSC, Notre Dame golf coach; Burke; Demaret; James Gerity, Adrian, Mich. industrialist and ND alumnus who recently donated \$5,000 to foster golf and bridge at the South Bend school; Sheehan; Miller; and Ed (Moose) Krause, ND athletic director. In the front row are Grace (l) and Thurn.

of one hour and 30 minutes each with a maximum of 20 pupils. During a lesson he works with each student individually.

In his teaching, both personal and television, Edwards tells the beginners not to be in a hurry to hit the ball. "Putting should come first," he says. "Not only is putting half of the game but by putting first students can get early into the primary good habit of keeping the eye on the ball."

#### Swing Precedes Hitting

After putting Edwards goes to the middle irons, emphasizing that swinging comes first and hitting second. His theory is that beginners have a tendency to want to lift the ball when they start hitting too early. Therefore he suggests they get in high grass and "mow it down." When they get the feel

of hitting through the imaginary ball he allows them to start firing away.

Through informality, Edwards keeps his television show interesting and informative. He suggests that viewers get their clubs and follow his grip and swing. "I just heard a lamp crash," he said once after a full follow-through. He will often pick out common first names and state, "Mary, that grip's all wrong, you're gonna' slice it."

The program, sponsored by Pilot Insurance Co., has been sold for 26 weeks and probably will be continued since the response has been excellent.

Direct plugs are out but Edwards helps all pros by telling his audiences to "see your home club professional and let him work out your particular problems."

# Tells Effects of Soil Conditioner on New California Course

By EDWARD C. KNIGHT

WE began the development of the first nine at North Ridge CC without including a chemical soil conditioner in our plans. When it was suggested that Krilium Loamaker would maintain porosity, aeration and water percolation of our somewhat difficult soil and reduce compaction, drying out and erosion, I had no first hand experience on which to base my decision.

However, I was ready to agree in principle with this type of soil conditioning. The old methods require the use of soil banks, composting sites, mulches, peat moss and mixing pits. With them goes the necessity of conveying, applying and surfacing. Labor costs for this work must be added to the already high material costs. Something must be done to reduce these costs.

Compaction is the number one problem on golf courses and always leads to poor aeration. In compacted soil, carbon dioxide is trapped in the root zone, preventing replacement by oxygen. These conditions create unthrifty plant growth and will lead to disease. Compaction also prevents the movement of fertilizer down into the root zone. Fertilizer on the surface cannot do its job and is apt to cause salt burn. From the golfer's standpoint compaction cuts down enjoyment of the game.

Every course is different, due to varying soil and climatic conditions, resulting in varying degrees of erosion, compaction and subsequent root development. Deep roots indicate adequate porosity or absence of compaction. Deep rooted grass aids in combating erosion and withstands drying summer heat. It also means that the turf recovers faster from divots, spike tears, and ball pits. Thus, a thoroughly homogeneous deep seed bed, one in which the soil structure, and thereby the porosity, is maintained, is the basic prerequisite to good turf.

We first roto-tilled Krilium into the soil



Erosion in untreated soil resulting from heavy rainfall 16 days after seeding. Runoff from 20,000 sq. ft. cut this 18-in. deep trench which is about 3-ft. wide. Ed Knight, author of this article, says his crew had no erosion repair work whatever in areas where soil had been treated with Krilium.

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of eight greens, the practice putting green and the three par tees of the first nine at North Ridge. Later we extended this treatment to include all the greens, aprons and collars, and 3-par tees of the second nine.

Within a year indications pointed toward the solution of the basic problem, and the club officials were enthusiastic.

Besides the physical evidence of actual comparison of root growth in treated vs untreated soil, we had enough experience to know that Krilium has maintained greater porosity, aeration and water percolation; has controlled erosion and not only produced better root development and healthier turf, but has also greatly facilitated watering and fertilizing. This means better playing conditions now, and should mean a reduction in maintenance costs.

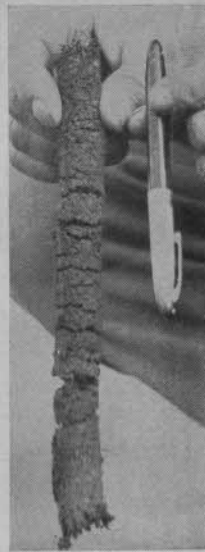
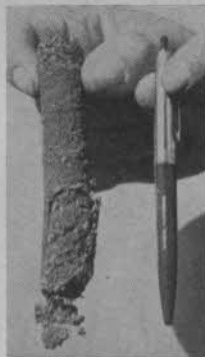
North Ridge is one of the newest 18 hole courses in Northern Calif. It's located half way between Sutter's Fort and Coloma, the site of the original discovery of gold by John Marshall, on 200 acres of rolling oak dotted terrain a few minutes drive northeast of Sacramento. The site includes some 60 acres which are set aside as homesites for members.

A young, diversified group, headed by J. F. Brady and E. J. Duffy, formed a non-profit corporation, elected officers, and began the long and complicated task of planning and building an 18-hole golf course, clubhouse and swimming pool. Memberships now are over the 500 mark.

### Bells Designed Course

The late Wm. P. Bell and son, Wm. F. Bell, were engaged to design the course. I had worked with them previously in the construction of the Bakersfield, (Calif.) CC and it was in this area I learned to keep an eye open for new methods that might solve maintenance problems. Prior to coming to Sacramento I was superintendent at Buena Vista GC and helped Eddie Novak build the Bakersfield Public GC. Before that I was in golf course construction and maintenance work in the L. A. area and found a marked difference in maintenance between coastal areas and the hot inland valleys.

After I arrived in Sacramento and inspected the site, I found an ideal location for what Billy Bell had designed; 18 championship holes, 58 sand traps with natural drainage, elevated tees and enormous varied greens averaging over 6000 sq. ft. of putting surface; all this set in among rolling hills and gullies with just the right degree of steepness and variety;



Plug on left measured only 5-in., altho its period of root growth was 54 days longer than 9 3/4-in. plug on right, which is from a Krilium-treated green. Latter was treated with 2 lbs.

of Loamaker per 100 sq. ft., roto tilled to a depth of 6-ins. in two directions and then graded, fertilized and seeded.

numerous big oak trees, a spectacular setting for the clubhouse on an oak-topped knoll. The over-all elevation provides an unusual panorama of the flat Sacramento Valley and the lofty Sierras to the east with their wintertime mantle of snow.

Inspection also showed deep erosion gullies. Soil analysis showed a decomposed granite type soil consisting of 78% coarse and fine sands, 11% silt and 11% clay. Aggregation tests, using the wet sieve method, showed a natural aggregate stability of 62% (after treatment with Krilium this jumped to 95%, but more of that later). This meant that with the normal rainfall expected, 21 in. annually, mostly in Dec., Jan., and Feb., we were going to have erosion trouble on any new seeded area we tried to bring up during those months. And, since our summer temperatures might go as high as 110 degrees, accompanied oftentimes by hot, dry north winds, we could have erosion troubles then too because of the copious amounts of water required to bring up new seed under these conditions. Since the soil melted so rapidly it was also evident that we would be faced with compaction problems in the immediate future.

Such seemingly unrelated events as a torrential rain, an early morning walk and a midnight ride by pranksters (?) all had a share in the development of North Ridge, and also an important bearing on the use and evaluation of Krilium.

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Treatment of our soil with Kriliium Loamaker was first given serious consideration in April, 1954. We had one green (No. 3) with grass showing and all other greens and tees 95% complete with the exception of seeding, when we decided to make a comparative test with treated vs untreated soil. No. 6 green was divided down the middle and Kriliium was applied with a fert. spreader at the rate of 2 lbs. per 100 sq. ft. The entire greens area was then roto-tilled twice to a depth of 6 in. The soil was dry on the immediate surface but had good working moisture below. An excellent seed bed was prepared over the entire green. At the time we were preparing this green, another crew was seeding No. 4 green. Two days later, before we had time to seed No. 6, an unseasonal, torrential rain fell - 1-1/2 in. in 24 hours.

The morning after the rain, I was accompanied on an inspection tour by R. L. Richards, club pres. and W. P. Anderson, club secretary and director of the North Calif. Golf Assn. All the roughed-in areas had puddled considerably, were soft and muddy and much of the course was criss-crossed with deep erosion gullies. No. 3 green was in fairly good shape because the grass was up. No. 4 was washed out and would have to be reseeded. The course was a sorry sight.

As we approached No. 6, we noticed at once a definite difference between treated and untreated areas. The untreated was puddled and it didn't take a magician to see that the surface structure was gone and that there was going to be a bad crust to work on. The treated area was still well aggregated. As I walked across the untreated half I sank ankle deep and water rose in my tracks. I stepped across the center line and was really surprised. I had to exclaim "Why it's just like stepping upstairs!" The treated area felt firm. There was no puddling or standing water.

We learned some things using 1200 lbs. of Kriliium on the first nine that we feel were improved upon in the second which accounted for the use of 1800 lbs.

It was found that the treated greens took water so much better than the untreated shoulders and aprons, that we couldn't take full advantage of what we had. We could soak the greens but had to come back and hit the aprons and shoulders again before the greens needed it. This was because most of the water ran off the untreated areas. On the second nine we treated greens, aprons and shoulders.

We also found that traffic between the

green and the traps packed the soil so badly we had difficulty keeping a stand of grass. Treating this area has eliminated the problem on the second nine.

One night pranksters (?), probably school kids, wired around the switch of one of our loaded 3/4 ton trucks an dtook a ride. It wasn't enough to drive around the fairways; they made a "U" turn on No. 5 green! And our course opening just 5 days away! To make matters worse, the green had been generously watered that same evening. Normally, we would have found it necessary to lift the sod, repair the base, relay the sod, and topdress. But amazingly enough, all we found was bent and broken grass, no ruts or mounds to repair.

From this incident we concluded that if aggregation and porosity are maintained, water can move freely through the soil. There will be no excess water near the surface that makes the soil muddy and subject to damage from unexpected traffic such as we had.

This seems to me to be the most significant feature of the treatment. The soil remains aggregated and porous, yet remains firm.

Seeding of the first nine was completed on June 4, 1954 and opened for play 90 days later, on Labor Day weekend, Sept. 4-5-6. The second nine was seeded in October and in spite of unusually cold weather, with several heavy frosts and several heavy rains, there was excellent germination and establishment of root growth in all treated areas. The greens were seeded to Seaside Bent, and the fairways and tees to a mixture of Seaside and Bermuda. The Bermuda of the second nine being held off and seeded in the spring. A 25 ft. collar of Kentucky Blue surrounds each green on the first nine and a 25 ft. collar of Merion Blue on the greens of the second nine.

A close inspection of the entire course has been made on numerous occasions and differences between treated and untreated areas are readily apparent.

1. Soil erosion from both watering and rainfall frequently starts at the very edge of treated surfaces and extends into the untreated; never into the treated soil.

2. Superior porosity, giving better aeration and water percolation in the treated soil as compared to untreated No. 3 green shows up graphically in comparative root development.

3. It is much easier to change cups in treated greens than it is in No. 3.

4. The soil of No. 3 takes less water,

(Continued on page 68)



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# The ASSISTANTS' DEPARTMENT

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## Three Pros Tell What They Expect of Assistant and How to Train and Encourage Him

THREE pros, Warren Orlick of Tam O'Shanter CC, Orchard Lake, Mich., Louis Bola, Highland G & CC, Indianapolis, Ind., and Tom Fry, San Mateo, Calif., Municipal GC, take over this month's Assistants' Department to give their ideas as to what makes an assistant valuable to the master pro, and what should be done by the pro to educate, encourage and reward a deserving assistant.

Loyalty, personality and responsibility head the list of qualities the three men think are most desirable in an assistant, while all agree that the pro can best encourage his assistant by giving him the opportunity to learn every phase of pro shop management so he'll be ready to step into a more lucrative job when the chance comes.

### Loyalty Works Two Ways

Warren Orlick thinks his assistant should be loyal above all other things. In his estimation, this means that the young man should be willing to forget immediate aspirations and concentrate on doing the best possible job for his employer. In turn, the pro has responsibilities in this respect. If he makes certain agreements with his assistant, such as allotting him a certain amount of playing time during the week, it becomes his obligation to live up to the agreement. Occasionally, the press of business interferes with this arrangement although Orlick feels that probably too many pros too often use this as an excuse to avoid going through with such agreements. The result is that the employee is inclined to become disloyal.

The Orchard Lake pro expects his assistant to take over and smoothly run the shop while he is absent and to be able to settle members' complaints without re-

ferring most of them, and particularly minor ones, to him. He also believes that the assistant should make every effort to become a walking encyclopedia on golf rules. Orlick holds regular sessions with members of his staff to make sure they are familiar with changes in the rules and are aware of the latest decisions and interpretations covering the entire rule book.

An assistant's education at Orchard Lake begins with teaching juniors. After he has learned Orlick's method of instruction he is graduated to instructing older golfers. At the same time he is familiarizing himself with all operations of the pro shop and sitting in at club committee sessions in order to learn everything possible about conducting tournaments and working with the maintenance department.

Orlick encourages his assistants to get out and take part in state and district tournaments, feeling that these competitive ventures play a big part in a home club pro's education. Last year he persuaded his club members to finance assistant Gene Bone's tour of the tournament circuit. Bone was also dispatched to Chicago to take part in the George S. May tournament because he was playing excellent golf at the time and Orlick was anxious for him to get a chance at breaking into the big money.

### Votes for Personality

Lou Bola, who presides at Indianapolis' Highland club and doubles as pres. of the PGA, Indiana section, thinks that personality is the most important ingredient in an assistant's makup. Lou doesn't confine this merely to mannerism or the degree of enthusiasm a young man shows on the job. He feels that it takes in appearance, manner of dress and the way in which the assistant handles himself in dealing with