

O. J. WHO?

By Charles G. Wilson

O. J. Noer (as in Norway), that's who! The greatest turfgrass agronomist of all time is a title most fitting for O. J. For forty some years, the mid 1920's through the mid 1960's, O. J. traveled the length and breadth of this nation, not once, but times too innumerable to keep track of, to offer help to turfgrass growers. He spent almost as much time in Canada as he did in the United States, and sampled the turf of St. Andrews along with golf courses in England, Spain, Japan, Mexico, the Caribbean Islands, etc.

Unquestionably, O. J. trod on more different golf courses than anyone else either before or since his time, passing on words of wisdom to each that helped the superintendent to grow better grass. The initials "O. J." stood for Oyvind Juul, so it is no wonder that he preferred to be called O. J. Herb and the late Joe Graffis called him "Red," but he had been "gray" for several years even before I met him in 1948 or 1949. The meeting was interesting because it called to my attention one small part of his vast turfgrass knowledge.



With experts at Rose Bowl (1956).

At the time I was working for the U.S.G.A. Green Section part time as a research assistant while attending the University of Maryland. Our turf research plots were a joint effort by the Green Section and the Department of Agriculture at Beltsville, Md. One or two winters before the meeting took place, Dr. Fred Grau had Al Radko and me collect many samples from the Alta fescue front lawn that bordered on U.S. Highway No. 1. I still remember attending a turf meeting sometime after the incident where O. J. was asked what he thought of Alta fescue as a lawn grass. His reply:



Noer checking long roots in Turforator hole, Big Spring Country Club, Louisville, Kentucky (1950).

"I guess it looks okay at fifty miles per hour."

Al and I collected and potted the tall fescue samples throughout the winter in our greenhouse. Fred said we should pick those that were finer in texture, with good color and disease free symptoms. This we strived to do, and then further narrowed the original selections to about 100 the following spring. These were then planted as large clumps in a Kentucky bluegrass lawn near our field house to see if they would be competitive. As I recall it was either that fall or the following year when O. J. visited the station. As Fred was showing him a clump of Alta fescue, O. J. reached down, removed a blade of the grass, rubbed the edge against his finger and then his tongue, and said: "Fred, I hate to tell you this, but this grass does not have the serrated or knife like edge that would make it a tall fescue, it's probably ryegrass." So were almost all the rest of the clumps that Al and I had planted. To this day it still amazes me that this man who didn't even like tall fescue could recall an identifying vegetative characteristic.

O. J. was mighty with the pen; mighty with the spoken word; and mightiest of all with his keen analytical mind. His technical background was superb. A native of Stoughton, Wisconsin, and son of a medical doctor, he got his Bachelor of Science degree in Soils at Madison. He worked on soil mapping and classification for the Great Northern Railroad shortly before World War I. During the war he was involved with the Chemical Warfare Division of the Expeditionary Force. In fact, he

wrote the history of chemical warfare following the conflict.

O. J. returned to Stoughton to work in the family "wagon works." However, this was not entirely to his liking. He longed to get back into agriculture, and told the Soils Department of his interest in getting a graduate degree if someone could help with the financing. Fortunately for turf, the Milwaukee Sewerage Commission was coming on line with a new and pioneering method of sewage treatment, and a by-product that was destined to become known as Milorganite. O. J. was the recipient of the fellowship they established to see if the product had any fertilizer value. You know the rest of the story. Milorganite was tested first on agricultural crops like corn, cabbage, and potatoes, with I might add, superior results to using farm manure or chemical fertilizers alone. However,



Trent Jones, O. J. Noer, Tom Mascaro and Supt. Carl Dilsaver on turf plots at Coastal Plain Experiment Station, Tifton, Ga. That's where O. J. gave me my first lesson on rating turf quality (1955).

Milorganite was primarily a nitrogen and trace element fertilizer that was ideal for grass, but that would have to be supplemented with extra phosphorus and potassium for good seed, fruit and vegetable yields.

O. J. credited the late Dr. Emil Truog of the Soils Department with the suggestion that Milorganite might find a good market on golf courses. Golf growth (1920's) was entering a boom period with lots of new construction. Also, about the only fertilizer being used when any was used other than farm manure was ammonium sulfate. Thus, did O. J. become a turfgrass agronomist, and it is a shame that he never got his doctor's degree. He went to work full time for the Sewerage Commission before completing his thesis. There were one or two minor research details that he and Truog wanted to look into a bit further, but O. J. never

found the time to return to Madison to do them. He was much too busy trying to find out "what makes turf grow," and when assured of the answers, passing the information on to the growers. And, this was at a time when State and Federal sponsored research was at a minimum, and the "greenkeeper" was quite secretive about his methods.



First bentgrass growers in Atlanta Pop Beckett, Noer, Charlie Danner (1958).

One of the first things O. J. did on arriving in Milwaukee was to establish a soil testing laboratory. Its use helped O. J. pinpoint the cause of the widespread loss of turf during the hot summer of 1928. O. J. believed as others did that some acidity helped to control weeds. He felt, however, that even the acid resistant grasses like the bents and red fescues would suffer if acidity was carried to extremes. The heat stress of 1928 bore this out. Proof of the pudding was apparent in the Milwaukee area where despite a concentrated effort to acidify the soil with ammonium sulfate the pH stayed near the neutral point. The reasons, as O. J. found, had to do with our "lime sands" used in top-dressing, and the hard water used for irrigation. Use of these offset the acid fertilizer with the result that little turf was lost despite the long hot summer.

O. J. credited superintendent Frank Dinelli of Northmoor Country Club in Chicago with helping him to understand the importance of depth in taking soil samples under turfed conditions. The first year our laboratory was in business, O. J. took soil samples of Northmoor fairways. When the laboratory report was finished, O. J. wrote to Frank and suggested that extra phosphorus might be helpful on some of the holes. He suggested applying 400 to 500 pounds of 20% superphosphate

per acre along with the Milorganite. The following year O. J. telephoned Frank and asked him to resample the soil. When O. J. reviewed the report he was amazed to find less, rather than more phosphate. He asked our chemist to retest the samples, feeling that our laboratory had made a mistake. When the retesting showed the same results, he called Frank and asked him why he had not applied the superphosphate as suggested. Frank said he had a workman use a shovel and bucket of sampled soil to make a composite that was sent to our lab. The previous year O. J. had used a soil probe and sampled a much shallower depth.

Thus came about the importance of depth of sampling on turfed areas because surface applications of P, K, Ca & Mg move slowly down through the soil profile. After considerably more testing on golf courses throughout the nation, O. J. standardized the depth of two inches as being the most meaningful for turf areas. When deeper samples are taken, recommendations for excessive applications of nutrients are made. This could be harmful if carried to extreme, or wasteful and costly even though the turf is not injured.



Broken legs didn't slow him down. Del Rio Country Club, Modesto, California (1953).



Always the photographer with Ed Cook, Ponte Vedra Country Club, Florida (1953).

It is surprising to me how long it has taken some universities and other soil testing laboratories to recognize this fact. We also find laboratories that remove the thatch before testing the soil. This results in recommendations for excessive applications. The actual tests don't lie. The fault is poor sampling and improper interpretation of the results.

Thousands of tests also showed O. J. that grass clippings contained amazing amounts of plant food nutrients. Where they were removed daily as on putting greens, recommendations for replacement had to be quite different and much higher than on fairways where they remained



Noer and Bob Williams check Milorganite distribution in Brod-Kasten spreader, Bob O'Link Country Club (1960).

Nitrogen needs were sixfold or more where clippings were removed, and potassium requirements were almost as high. O. J. didn't just surmise this would be the case. He had superintendent Les Verhaalen at Brynwood Country Club and later superintendent Jim Hamner of Memphis (Tenn.) Country Club actually save all the grass clippings from a putting green for analysis. These were Milorganite fed greens. And, while Milorganite had an almost perfect ratio of plant food nutrients for fairways it had to be and was supplemented with potash for the putting greens. Increasingly through the years teeing areas also started to show potassium deficiencies because of clipping removal, and now that some courses are removing clippings from fairways we can expect the same thing to happen there.

With increased use of chemical fertilizer mixtures in the 1930's, O. J.'s testing brought to light an imbalance or wasteful build up of phosphorus in putting green soils.

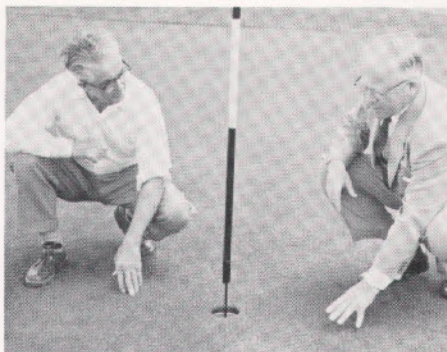
Most of the mixtures used then were low in nitrogen and high in phosphorus like a 3-12-6 or 5-10-5. Some greens were becoming "low grade phosphate mines" according to O. J., with a resultant foul up in iron metabolism. He became known as "iron chlorosis Noer" and showed more than one golf course how to save the grass with prompt sprays of iron sulfate.

Noer was the consummate agronomist. His involvement covered anything that happened to turfgrasses. He tested many new products as they were introduced for turf use. He became involved with fungicides, insecticides and herbicides in trials he made on turf under actual playing conditions. His applied research was the essence of simplicity. He laid out plots using "half, recommended and double" rates of application. He reasoned that one should know if less will do the job, and also be aware that "overlaps" are unavoidable, thus products must be safe to apply at double the recommended rate.



Noer and Ron Kirby rate Tifgreen bermuda growth on beach, Arawak Country Club, Nassau, Bahamas (1962). Milorganite was used in this test, then on fairway planting at 17 tons per acre, to overcome salt buildup.

And, he had the uncommon ability to see beyond the efficacy of the product's intended value. He was concerned, always, for the grass and looked for any delayed reaction that might harm it even though the weed, disease, etc. were being controlled. It was O. J. who first called attention to the fact that use of 2,4-D caused a delayed injury to bentgrass and brought about an increase in Poa annua. He had pictures of his plots at Milwaukee Country Club to prove it. Similarly, with a resurgence of interest in the use of calcium arsenate as an herbicide for Poa control, O. J. warned that it



Noer and Owen check Penncross green, Royal Montreal Country Club (1959).

was an unstable chemical that could damage good turf, especially under acid soil conditions. Such was the case at more than one golf course in New England.

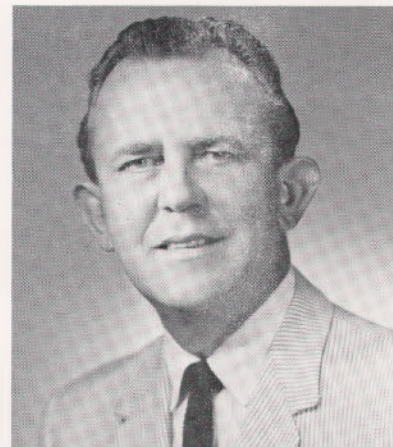
Noer's vast experience also taught him early on that "changing the grass" to a new and improved but different variety would not work unless the management practices were changed at the same time. Many were the failures where Merion Kentucky bluegrass was tried in fairways that continued to be managed for bent and annual bluegrass. Fairway irrigation more than any other factor brought about the demise of Kentucky bluegrass and red fescue and brought in Poa annua in the north. O. J. wrote about and recorded this on film, and had good reasons indeed for advocating bentgrass while others were pushing Kentucky bluegrass. Just think of the monies that would have been saved had everyone followed O. J.'s advice.

One could go on and on about O. J.'s accomplishments. He was honored in his time by the USGA, the GCSAA, and many local and regional golf superintendents and turfgrass associations. The one I am proudest of is the foundation



Noer and John Stampfl check knotweed control with Sodium Arsenite, Milwaukee Country Club (1959).

established to honor his name. Although O. J. may be forgotten with the passage of time, his ideals will live on with continuing financial support of turfgrass research through the O. J. Noer Research Foundation, Inc.



Editor's Note: We are deeply grateful to Charlie Wilson for the time and effort he has given in putting together this special issue of the GRASSROOTS about a special man to Wisconsin.

Charlie himself is a special person. He is the man who pioneered the Green Section Regional Turf Service in 1952. Charlie was born in Port Jervis, New York and trained for his profession at the University of Maryland, where he earned a B.S. degree in Agronomy in 1950. While he was still an undergraduate he joined the USGA Green Section Staff in 1947 as a research assistant and field agronomist at the Beltsville, Maryland office. In 1952, the USGA announced that the Green Section, which had been devoted to research for the previous 30 years, would take an entirely new approach. From that time on, it would emphasize direct service to member clubs through personal visits by Green Section staff. Before establishing the first regional office, the USGA assigned Charlie to make a first-hand survey of the West Coast conditions during the spring of 1952. The results of the survey showed that the need and desire for such a position was there. The rest is history. Charlie was the first full-time turfgrass consultant the USGA had in the field. He provided a strong foundation for the Turf Advisory Service that so many of us subscribe to annually.

Charlie left the USGA in June of 1955 to become an agronomist with Milwaukee's Sewerage Commission. He eventually became head agronomist, sales manager and director, succeeding O. J. Noer. It was during these years that he became so close to O. J. and got to know him so well.

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