

GREEN SECTION REPORTS ON TOUGH-WEARING GRASSES

★ Interest is steadily mounting in the tough wear-resistant turf which is produced by the two species of *Zoysia*,—*Zoysia japonica* (Korean lawn grass) and *Zoysia matrella* (Manila grass). The first of these two species, having been found growing natively in Manchuria, is, as would be expected, sufficiently cold-resistant to survive the winters in parts of Michigan and Wisconsin. Its leaves, however, are so coarse that for golf course purposes it has not aroused the interest as has the second species, *Zoysia matrella*, even though this latter species is much less resistant to low temperatures.

Neither of the *Zoysia* species is native to the United States. Seed of *Zoysia matrella* was first sent in from Manila on August 8, 1911, by C. V. Piper of the Bureau of Plant Industry of the Department of Agriculture and experimental plantings were made at once at his recommendation in Florida. By 1912 his early notes on this first experimental planting stated that the grass showed unusual promise along the Gulf Coast and Atlantic Coast in Florida. By 1923 sufficient evidence had been accumulated by the Department of Agriculture to justify the following statement in the book by Drs. Piper and Oakley entitled, "Turf for Golf Courses"; "Manilla grass is native to the Philippines and other places in the Malayan region. In Manila it makes a very fine and beautiful turf seen on the Luneta. In experimental trials along the Gulf Coast of the United States this grass has formed very beautiful plots of fine leaved turf, which remains green all winter. The texture of the turf would make it ideal for greens and there is hope this grass may be exactly what is desired for Gulf Coast and Florida courses." By 1933 the Department of Agriculture had sent vegetative stock to 9 of our southern and southwestern state experiment stations.

Since then the Green Section has continued its interest and faith in the potentialities of *Zoysia matrella* although little popular interest was aroused before the late 30's. Its toughness together with its drought resistance, its fine texture and its ability to grow under very low cut, all have indicated its very strong potentialities as a tee grass in climates in which it is winter hardy. Its wide scale use on the tees in Louisville, Ky., which tees received wide publicity last year in "Time" and other magazines, arose as a result of a shipment of a square foot of stolons by the Green Section to C. O. Bohne of that

city in the spring of 1938. By the fall of 1939 he wrote that they anticipated having sufficient vegetative stock to plant 160,000 square feet in *Zoysia matrella* the following spring, from which stock of *Zoysia matrella* many of the tees in Louisville have since been sodded.

Weeds and Divots Reduced

Zoysia matrella produces a dense sod composed of tough stolons on the surface of the soil and innumerable tough roots below the surface, with the result that neither weeds nor divots are serious problems in established *Zoysia* sod. Its summer color is a rich green. It never produces a great deal of erect growth, not growing more than approximately 6 inches in height if left uncut throughout the entire season. It has been demonstrated to tolerate a putting green height of cut as far north as Milford, Conn. In the South it is acclaimed as perhaps the best shade grass available and its growing season is, if anything, a little longer than that of Bermuda grass. In the vicinity of the District of Columbia it has over-wintered very satisfactorily, although it becomes dormant much earlier in the fall than does the bluegrass and fescue and becomes green much later in the spring. Last fall the Green Section's *Zoysia* plots remained green until the third week in October, at which time a heavy frost caused most of the strains to go dormant immediately. Normally the *Zoysia matrella* does not become green before the latter part of April or early in May. The turf, however, remains wear-resistant even though straw colored instead of green. In addition to its short growing season there are two other disadvantages connected with the use of *Zoysia matrella*. One is that it does not readily produce seed in this country and we are not certain how easily turf could be obtained from seed if it were available. The other is the slowness with which turf is established from vegetative plantings.

It is usually stated that one must allow two years for the establishment of a solid turf from vegetative plantings. The Green Section, however, in 1944, using one 4-inch pot of *Zoysia* for each 16 square feet of turf, was successful in establishing a very satisfactory sod from many of its strains of *Zoysia matrella* within a period of 3½ months. This was accomplished by sprigging the *Zoysia* rather than planting it in 2-inch squares, as is frequently advised, and by adequately feeding and watering the new plantings. Although when once

established, the *Zoysia* is a very drought-resistant grass, it is obvious that in order to initiate and accelerate good stolon development it is wise to use water as consistently as when planting the bents or any other grasses vegetatively. In planning a nursery, therefore, it should be so located that water facilities are conveniently at hand.

For use on tees it will be necessary, because of the slow growth of the *Zoysia* to establish sod nurseries of it and subsequently sod the tees with the well established turf. In this way the grass is readily established on the tees and should be able at once to resist weed invasions as well as the wear and tear of the game.

The Green Section has selected and increased numerous strains of both species of *Zoysia*. Some of these are being increased in nursery rows this year in order that at least small amounts may be available to member clubs which are interested in experimenting with the potentialities of *Zoysia* under their conditions. It is to be hoped that, through breeding, the cold resistance of *Zoysia japonica* can be combined with the fine texture of *Zoysia matrella*. With this idea in mind, the Green Section has furnished vegetative material of both species to the Indiana and the New Jersey Agricultural Experiment Stations, at both of which institutions there are well trained men interested in the breeding of superior strains of turf grasses particularly for use on tees and fairways.—USGA Green Sections, Timely Turf Topics.

Ohio GA Stages Clinic and Tournament

★ OHIO GOLF ASSN. held its first annual clinic and championship of club champions at Scioto CC, Columbus, Aug. 25-26 with good attendance of state golf presidents and club champions.

John B. Gillespie, pres., Ohio GA, at the clinic said that plans for expansion of the idea to have other club officials, pros, greenkeepers and managers at the next annual session already were taking form. One suggestion advanced was that club officials bring club financial statements for discussion and comparison. Harold B. Donley, Scioto pres., and Gillespie, a previous Scioto pres., paid tribute to their own club's department heads in endorsing the proposal that the clinic field be expanded to have the executive and operating officials of clubs of the state get together for an annual business session.

Harry Moffitt, pres., Ohio Section PGA, made an excellent presentation of the pros' collective effort to promote golf. Harry detailed difficulties in the pros' job of trying to get the public acquainted with the steady advance in golf instruction results. Moffitt explained considerable of the

backstage operations and troubles of pros during wartime. Sharp drop in sales made it tough for many of the pros to get by.

Greenkeepers Work Appreciated

Evidence of considerable improvement in greenkeeper public relations was cited. The players could see how excellently courses had been maintained despite war conditions, and for the first time clearly realized what a task the greenkeepers were performing.

L. W. St. John, director of athletics of Ohio State university spoke on "Inter-collegiate Golf." Basing his opinions on the great growth of golf interest at Ohio State's 36-hole establishment St. John forecast a big place for the schools in golf's enlargement.

Emphasis on strictly business operations of municipal golf, with political pressure applied only to assure that golfers got efficiently run establishments without adding to taxpayers' loads, was said by Mayor James A. Rhodes of Columbus, to be the only acceptable policy for many golf these days. Rhodes can cite the Columbus public courses as first class examples of the application of this policy. He is a former caddie who still plays in the high seventies. In Ohio they're talking about the Rhodes business handling of Columbus civic problems and his personality as indicating he is destined for national political prominence.

The Mayor has taken personal interest in the many course caddie situation as affording an opportunity for the citizenship training of kids. His references to the caddie matters stirred considerable discussion on caddie training and management. In some places high school coaches were engaged as caddie-masters for the summer. Several instances were cited of the caddie situation being better handled when pros' wives took over during the wartime absence of their husbands. Several golf club presidents spoke of the possible qualifications of women for caddie-master jobs at clubs where experience has not been satisfactory.

Golf Double by 1949?

Herb Graffis, GOLFDOM'S editor, spoke on "The Future of Golf." Graffis declared that estimates based on reports from army and navy sports authorities and industrial recreation executives, together with other data, pointed to the probability of the number of golfers being doubled by 1949. He said that if all of the nation's present 2,250,000 decided to play on one day there would not be enough courses for them. Daily total play capacity of all U. S. courses is less than 1,500,000. He referred to the plans and inquiries for new courses now receiving the attention of golf course architects as being more numerous than during the boom years of the twenties.